

Using This Bulletin

This bulletin is intended primarily to provide users with Penn State academic information.

To browse the site, use the buttons across the top of the home page. For specific searches, use the search engines on the upper right of the home page or the Site Index (last button in the row across the top of the page).

For course descriptions, click the "University Course Descriptions" button (first on on the left on the home page) or use the Course Description Fast Path search engine on the upper right of the home page.

In the bulletin, the word *Program* refers to an academic program (majors, minors, and special programs). Search for academic program information by program category (associate or baccalaureate: two-year, four or more years), campus, or college with the buttons and links on the home page, or search for specifics with the site search engines.

The University-wide General Education requirements are explained under that heading on the home page.

Links to offices that may be useful to users are under the "Additional Resources" heading on the home page.

At the upper right edge of the home page, you may access searches for Penn State individual and department directories, link to the Penn State home page, or access another Web browser.

The site follows conventional navigation practices, so once in secondary pages, users should be able to click through to find what they want.

ACADEMIC AUTHORITY

The University Faculty Senate has responsibility for and authority over all academic information contained in the Undergraduate Bulletin.

REGULATIONS SUBJECT TO CHANGE

Each step of the educational process, from admission through graduation, requires continuing review and appropriate approval by University officials. The University, therefore, reserves the right to change the requirements and regulations contained in this bulletin and to determine whether a student has satisfactorily met its requirements for admission or graduation, and to reject any applicant for any reason the University determines to be material to the applicant's qualifications to pursue higher education.

Authority over Academic Information

The University Faculty Senate has responsibility for and authority over all academic information contained in the Undergraduate Bulletin.

University Phone Numbers

To telephone the administrative headquarters of the University at the University Park campus, dial (or ask the operator for) area code 814 and the desired number. If you do not know the number, call 814-865-4700, Penn State Call Center information. For telephone numbers of other Penn State locations, see

[Penn State Undergraduate Campuses](#)

. Frequently used University Park campus numbers are:

Undergraduate Admissions: 814-865-5471

Graduate Enrollment Services: 814-865-1795

Registrar's Office: 814-865-6357

Penn State encourages qualified persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact the Office for Disability Services, 814-863-1807, in advance of your participation or visit.

STATEMENT OF NONDISCRIMINATION

The University is committed to equal access to programs, facilities, admission, and employment for all persons. It is the policy of the University to maintain an environment free of harassment and free of discrimination against any person because of age, race, color, ancestry, national origin, religion, creed, service in the uniformed services (as defined in state and federal law), veteran status, sex, sexual orientation, marital or family status, pregnancy, pregnancy-related conditions, physical or mental disability, gender, perceived gender, gender identity, genetic information, or political ideas.

Discriminatory conduct and harassment, as well as sexual misconduct and relationship violence, violates the dignity of individuals, impedes the realization of the University's educational mission, and will not be tolerated. Direct all inquiries regarding the nondiscrimination policy to Dr. Kenneth Lehrman III, Vice Provost for Affirmative Action, Affirmative Action Office, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901; Email: kfl2@psu.edu; Tel 814-863-0471.

Board of Trustees

For information, including a trustee membership list, see: psu.edu/trustees

University Administration

See: <http://www.psu.edu/this-is-penn-state/leadership-and-mission/our-administration>

Mission of the University

See [This is Penn State: Mission and Character](#)

Options for Undergraduate Study

The undergraduate degree programs of the University provide students with opportunities to increase their knowledge and understanding of the world and to grow in their individual skills and capabilities for learning, analyzing, creating, communicating, and forming good judgments. All undergraduate degree programs and courses offered by the colleges and other degree-granting units of the University are under the academic sponsorship of a faculty committed to scholarship and are implemented under the academic policies and student rules established by the University Faculty Senate. They are intended to be flexible in accommodating students interested in learning, whether through traditional or nontraditional offerings, while enrolled on either a part-time or a full-time basis. The degree programs and courses of the colleges and other degree-granting units are offered through resident or distance education. Credit courses are available to degree candidates on University campuses as well as through off-campus credit-granting activities such as internships, practicums, field trips, and foreign studies, as well as via continuing and distance education mechanisms, such as the World Campus. Students not formally admitted to degree candidacy (including provisional and nondegree students) may participate in resident offerings as time and space permit, as well as in continuing and distance education.

University Outreach

Penn State extends the intellectual expertise and resources of the University through teaching, research, and service to address the social, civic, economic, and environmental issues and opportunities of the Commonwealth, nation, and world.

Working closely with its colleges, the University delivers outreach programs and services to support the needs of people throughout Pennsylvania and beyond at convenient times and accessible locations.

For information, see
www.outreach.psu.edu

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Research

Research--in addition to teaching and public service--is a primary mission of the University. A strong research program strengthens both undergraduate and graduate education by building the body of knowledge and experience on which both are based.

For undergraduate instruction, research brings to the classroom enthusiasm, practical experience, and up-to-date laboratory equipment, as well as opportunities for honors thesis topics and participation in research programs. For graduate programs, research furnishes thesis topics, stipend and tuition support, and experienced faculty to train students as the next generation of researchers. Penn State's national academic reputation depends greatly on research publications and other scholarly activities of the faculty, whose combined teaching, research, and public service efforts are the hallmarks of a major university.

INVENTIONS AND PATENTS---Patentable discoveries made by University faculty, staff, and graduate students that involve the use of University funds or facilities are the property of the University. Both undergraduate and graduate students fall within the University staff category whenever they are employed in connection with institutional research projects. Patents, with the inventors sharing in the royalties, are administered in the public interest by The Penn State Research Foundation, a nonprofit organization made up of faculty, alumni, industry representatives, and members of the University Board of Trustees. Royalty income is shared between inventor, the organizational unit, and The Penn State Research Foundation. The Penn State Research Foundation's share is used to foster the advancement of technology transfer and research at the University.

For information, see
www.research.psu.edu/

Inventions and Patents

Patentable discoveries made by University faculty, staff, and graduate students that involve the use of University funds or facilities are the property of the University. Both undergraduate and graduate students fall within the University staff category whenever they are employed in connection with institutional research projects. Patents, with the inventors sharing in the royalties, are administered in the public interest by The Penn State Research Foundation, a nonprofit organization made up of faculty, alumni, industry representatives, and members of the University Board of Trustees. Royalty income is shared between inventor, the organizational unit, and The Penn State Research Foundation. The Penn State Research Foundation's share is used to foster the advancement of technology transfer and research at the University.

For more information, see <https://www.research.psu.edu/otm/inventors>

History

For information, see [This is Penn State: Our History](#)

Division of Undergraduate Studies (DUS)

The Division of Undergraduate Studies is an academic unit of the University that offers advising programs at the University Park campus and all other undergraduate locations.

For information, see
www.psu.edu/dus/

Schreyer Honors College

For information, see [Schreyer Honors College](#)

University Faculty Senate

For information, see senate.psu.edu

The University Libraries

For information, see: <https://libraries.psu.edu/>

Penn State Undergraduate Campuses

For information, see <http://www.psu.edu/academics>

Pennsylvania College of Technology

For information, see
www.pct.edu

Graduate School

For information, see <http://gradschool.psu.edu/>

Penn State Law

For information about Penn State Law, please visit: pennstatelaw.psu.edu.

College of Medicine

For information, see

<http://www.pennstatehershey.org/web/college/home>

Minimum Requirements for Admission to Degree Candidacy

To be eligible for admission consideration to the University as a degree candidate, either as a beginning student or as a student with advanced standing, an applicant must meet the following minimum requirements:

1. Graduation from an accredited secondary school. Penn State requires proof of graduation or a GED for admission to four-year degree programs.
2. Completion of the required units of preparatory work as indicated under the heading Minimum Carnegie Units.

A secondary school diploma issued by the Pennsylvania Department of Education, or appropriate authority in another state, may be accepted as equivalent to graduation from an accredited secondary school and as equivalent to the minimum secondary school units required for admission, as indicated under the Minimum Carnegie Units heading, with the exception of math and world language.

The University accepts the definition of a secondary school unit as established by the Carnegie Foundation. A unit represents a year of work in a subject in a preparatory school or secondary school, provided that the work done in that subject is approximately one-fourth of the total amount of work regularly required in a year in the school.

The University reserves the right to deny admission to any applicant for admission for any reason the University determines to be material to the applicant's qualifications to pursue higher education.

Admission to degree candidacy is specified in terms of enrollment in a college or school of the University or in the Division of Undergraduate Studies. Entrance to a baccalaureate major is a subsequent step that normally occurs near the end of the second year of study. Both for admission to a college or school and for entrance to a major, a student must satisfy the requirements of the University, of the particular college or school, and of the major area. In special circumstances, the University may need to further restrict admissions to a college or school and entrance to majors because of space limitations.

Minimum Carnegie Units

Baccalaureate and Associate Degree Programs

See the minimum number of secondary school units required for admission consideration to a **baccalaureate degree program** [here](#).

See the minimum number of secondary school units required for admission consideration to an **associate degree program** can be found [here](#).

First-Year Admission

An applicant for admission as a beginning student in the first-year class must meet the [minimum requirements for admission](#).

to degree candidacy prior to the time of matriculation. All offers of admission are conditional until these requirements have been met.

Each applicant is evaluated on the basis of the high school record and results of the Scholastic Assessment Test (SAT) or American College Test (ACT). This evaluation produces an evaluation index. Admission decisions are made on the basis of a review of the applicant's evaluation index in relation to the requested area of enrollment (academic program), space availability, the quality of the credentials presented by other applicants, and such other academically relevant information deemed appropriate by the Undergraduate Admissions Office and approved by the Senate Committee on Admission, Records, Scheduling, and Student Aid.

When openings at the requested location or in the requested program of the University are filled, qualified applicants will be offered admission to their alternate choice of program or location or notified of campuses where openings still exist.

COLLEGE ENTRANCE TESTS--Applicants for first-year admission to the University are required to submit scores of the Scholastic Assessment Test (SAT) of the College Entrance Examination Board or the American College Test (ACT). SAT or ACT results of the junior-year testing periods are recommended. Exceptions to the requirement for scholastic assessment test scores will be granted to adult learners who have been out of high school for five or more years or are veterans with four or more years of service. Exceptions to the required courses completed also may be granted. Adults may be requested to submit a statement of personal goals or to participate in an interview.

SELECTION OF THE AREA OF ENROLLMENT--It is necessary for an applicant to indicate one of the academic units of the University in which he or she wants to study. If an applicant is undecided about the choice of an academic unit, he or she may seek enrollment in the Division of Undergraduate Studies.

CHANGING THE AREA OF ENROLLMENT--An applicant who has been admitted to an academic college or unit of the University may not change to another without satisfying entrance requirements of the college or other academic unit of the University to which he or she wants to transfer.

PREVIOUS ATTENDANCE AT ANOTHER COLLEGE--An applicant must state on his or her application whether he or she has ever attended any other college or university. Failure to indicate, at the time of application, previous registration at another college or university may result in refusal or cancellation of admission. An applicant who has attempted fewer than 18 semester credits at another regionally accredited college or university will be considered as a first-year applicant. An applicant who has attempted 18 or more semester credits at another regionally accredited college or university subsequent to high school graduation will be evaluated as an advanced standing applicant.

OBTAINING AN APPLICATION -- The application for admission [is available on the Web](#). **Web applications are preferred.** A paper application can be obtained as a PDF on the Web site or by writing to the Undergraduate Admissions Office, The Pennsylvania State University, 201 Shields Building, University Park, PA 16802-1294 (telephone: 814 865-5471), or by contacting an admissions officer at any University undergraduate campus.

Advanced Standing (Transfer) Admission

An applicant who has attended any regionally accredited college or institution on the college level and attempted 18 or more semester credits subsequent to high school graduation may be considered for admission with advanced standing. Attendance at any and all other institutions must be reported at the time of application. Failure to indicate, at the time of application, previous registration at another college or university can result in refusal or cancellation of admission.

An applicant for admission with advanced standing must meet the

[minimum secondary school requirements](#)

for admission to degree candidacy prior to the time of matriculation. Advanced standing applicants are considered for admission on the basis of the applicant's requested academic program, space availability, and the academic quality of their work at the previously attended institution(s). A minimum cumulative grade-point average of at least 2.00 (C) out of 4.00, as computed for Penn State students, is required, although certain areas of study may have additional requirements. In addition, an applicant must be in good academic and nonacademic standing. An applicant whose overall grade-point average is less than 2.00 (on a 4.00 scale) but has a grade-point average of at least 2.00 (on a 4.00 scale) at all institutions attended in the four years prior to the requested enrollment semester may apply for admission as an advanced standing student with forgiveness. An applicant who has not attempted any collegiate level course work four years prior to the requested enrollment semester may also apply for advanced standing with forgiveness. An applicant who does not meet the minimum requirement of a grade-point average of at least 2.00 and does not meet the criteria for advanced standing with forgiveness may enroll in credit courses as a nondegree student in accordance with applicable policies and procedures.

Advanced standing credits may be awarded for college-level work taken at regionally accredited institutions provided Penn State offers a similar class and the course grade earned is equivalent to a grade of A, B, or C at this University. The credits also must be useful to the student's program of study. An academic adviser determines which of the transferable credits are applicable to the program of study at Penn State. Credits are transferred, but grades and grade-point average are not. Advanced standing students enter the University without an average and their average begins with the completion of their first semester of study at Penn State.

Under certain circumstances, the University may need to restrict advanced standing admissions to a particular college or school because of space limitations.

Entrance to a major is an additional step beyond admission to a college or school. It involves additional academic requirements and may be subject to additional restrictions because of space limitations.

APPLICATION PROCEDURE — The application for admission

[is available on the Web.](#)

Web applications are required for advanced standing applicants.

In all cases where work has been taken at other institutions, an official transcript from each place of attendance must be submitted directly to the Undergraduate Admissions Office by the registrar of the institution attended. An applicant currently attending another institution also must provide a schedule of courses in progress or to be completed before enrollment at Penn State, including course name, number, description, and number of credits. The applicant's secondary school record must be submitted directly to the Undergraduate Admissions Office by the secondary school. The Undergraduate Admissions Office may require the applicant to send a catalog showing the courses that he or she has taken at the college previously attended. All credentials become part of the permanent records of the University.

ENTRANCE TO A MAJOR — An advanced standing degree candidate may be admitted to a college or school of the University. To be eligible for entrance to a major, a student must meet the entrance-to-major requirements of the University, of the college or school, and of the program area. Under certain circumstances, further restrictions or exceptions on entrance to majors may be required because of space limitations. Students are expected to work with advisers and to utilize current information about entrance requirements and restrictions when exploring academic program alternatives and making program and course selections.

CHANGING THE AREA OF ENROLLMENT — An applicant who has been admitted to an academic college, school, or major of the University may not change to another without satisfying entrance requirements of the college/school and major to which he or she wants to transfer.

Provisional Students (Degree Seeking)

An applicant seeking to pursue a degree program and holding a high school diploma or its equivalent but without the criteria required for admission as a degree candidate may be accepted as a provisional student and enroll in credit courses, if space is available, to pursue a program leading to either a baccalaureate or associate degree if the following criteria are met:

1. The student is making satisfactory progress toward admission as a degree candidate. Progress is satisfactory if a student has completed 18 credits with a minimum cumulative grade-point average of 2.00 (on a 4.00 scale). If a student has completed 18 credits with less than a 2.00, then he or she is given a warning. A student who has completed 27 credits with a cumulative grade-point average of less than 2.00 will not be permitted to enroll as a provisional student in any subsequent semester, unless the student has earned more than a 2.0 grade-point average in the most recently completed semester. No student, regardless of cumulative grade-point average, who has completed 36 credits will be permitted to enroll as a provisional student in any subsequent semester.
2. There is space available after degree candidates have been accommodated.
3. The student has not been dropped for unsatisfactory scholarship from any college or university previously attended. If a provisional applicant attended another college or university and attempted 18 or more semester credits within the last four calendar years, the applicant must have at least a 2.0 (on a 4.0 scale) cumulative collegiate average. However, if it has been four or more calendar years since the applicant attended the other college or university and the cumulative grade-point average is less than 2.0, the applicant is eligible for provisional admission consideration.
4. The student has not been dismissed or suspended for nonacademic reasons from any college or university. An applicant not in good standing at another accredited college or university for disciplinary reasons must consult with the director of the Office of Judicial Affairs for admissions clearance.

NOTE: An applicant holding a baccalaureate degree or higher is not eligible to enroll as a provisional student. The applicant is referred to the graduate nondegree program.

OBTAINING AN APPLICATION--The application for admission [is available on the web.](#)

Web applications are preferred. A paper application can be obtained by writing to the Undergraduate Admissions Office, The Pennsylvania State University, 201 Shields Building, University Park, PA 16802-1294 (telephone: 814-865-5471), or by contacting an admissions officer at any University campus.

ADMISSION OF PROVISIONAL STUDENT AS A DEGREE CANDIDATE--A provisional student may apply for admission as a baccalaureate degree candidate with advanced standing to a college or school of the University, or to the Division of Undergraduate Studies, upon completion of at least 18 credits with at least a 2.00 cumulative grade-point average. All these credits must be earned at this University. To be eligible for admission, the provisional student must satisfy the academic requirements of the University and the college of enrollment.

Nondegree Students

A person enrolled in a course who is not a degree candidate or provisional student is classified as a nondegree student. A nondegree student must either hold a high school diploma or its equivalent to take undergraduate courses. Exceptions may be made by the Undergraduate Admissions Office for students currently enrolled in high school (dual-enrollment students).

A nondegree student who has not been dropped from degree or provisional status by this University or any other college or university for unsatisfactory scholarship will be listed as a nondegree regular student and may enroll in any number of credits, not to exceed the typical credit load of a full-time student per semester if criteria 1, 2, and 3 below are met.

Students who have changed from degree candidates to nondegree regular or nondegree students who intend to become degree candidates must also meet criterion 4.

A nondegree student who has been dropped from degree or provisional status by this university or any other college or university because of unsatisfactory scholarship will be listed as a nondegree conditional student and may enroll in a maximum of 12 credits per semester if criteria 1, 2, 3, and 4 (on the following list) are met.

1. The student has completed the prerequisite for the courses to be scheduled or has obtained permission from the instructor to schedule the course.
2. Space is available after degree candidates and provisional students have been accommodated.
3. The student has not been dismissed or suspended for nonacademic reasons from any college or university. An applicant not in good standing at another college or university for disciplinary reasons must consult the director of the Office of Judicial Affairs for admission clearance.
4. The student has obtained academic advising/counseling from an adviser/counselor designated by the academic unit to which admission, or reinstatement and re-enrollment, is desired.

LIMITATIONS TO ENROLLMENT AS A NONDEGREE STUDENT: A student in nondegree status (regular or conditional) may remain in that status for a maximum of 30 credits, at which time the student must be accepted into a degree program to continue taking credit courses. Nondegree conditional students must achieve a semester grade point average of 2.01 or higher every semester or will be dismissed from the University and may only re-enter through the academic renewal process. Students in nondegree status who are not eligible for a degree program after completing 30 credits may continue to take credit courses provided a semester grade-point average of more than 2.00 continues to be earned and they have written support from their intended major. Students who do not meet these provisions will be dropped and may only reenter Penn State through the academic renewal process. Nondegree regular students who are in good academic standing and do not intend to earn a degree may continue taking credit courses as long as a cumulative grade point average of 2.00 is maintained.

NOTE: A student must be admitted, or reinstated and re-enrolled, as a degree candidate to apply the credits earned as a nondegree student toward fulfilling the requirements for a degree. The dean of the college or school of enrollment shall decide which credits may be used to fulfill the degree requirements.

OBTAINING AN APPLICATION--A nondegree application can be obtained by contacting the Office of the University Registrar, The Pennsylvania State University, 112 Shields Building, University Park, PA 16802-1292 (telephone: 814-865-6357), or by contacting the Registrar's office at any University location. The form is also available at www.registrar.psu.edu on the Web.

ADMISSION OF NONDEGREE STUDENT AS A DEGREE CANDIDATE--A nondegree student may apply for admission as a baccalaureate degree candidate with advanced standing to a college or school of the University, or to the Division of Undergraduate Studies, upon completion of at least 18 credits earned at this University with at least a 2.00 cumulative grade-point average. An applicant who has completed at least the equivalent of two years of baccalaureate degree work before applying for admission as a baccalaureate degree candidate must have the approval of either the dean of the college or school in which enrollment is desired or of the director of the Division of Undergraduate Studies if the student wants to enroll in that division. To be eligible for degree admission, the nondegree student must meet the academic requirements of the University and the college or school in effect at the time of application.

Re-enrollment

A student who was once admitted and enrolled as a degree candidate and wants to resume study is required to apply for re-enrollment consideration under the conditions specified in Faculty Senate Policy 58-00.

To resume degree candidacy, go to the Office of the University Registrar's Web site,

www.registrar.psu.edu

, print off and fill out the Re-enrollment form, and submit it to the campus to which you want to enroll. An application for re-enrollment can also be obtained by writing to the Office of the University Registrar, The Pennsylvania State University, 112 Shields Building, University Park, PA 16802-1292; 814-865-6357, or by contacting the Registrar's Office at any University location. It is recommended that applications be submitted to the Office of the University Registrar at least one month before registration.

Reinstatement

A student who has been dropped from the University because of unsatisfactory scholarship or who has been dismissed from the University for nonacademic reasons is required to be reinstated in order to resume degree candidacy. To initiate a reinstatement request, go to the Office of the Registrar's website,

www.registrar.psu.edu

, print and fill out the Reinstatement form and Submit it to the campus to which you plan to enroll, or the Office of the University Registrar, The Pennsylvania State University, 112 Shields Building, University Park, PA 16802-1292.

Leave of Absence

A student who is a candidate for an associate or baccalaureate degree may typically apply for a leave of absence for a period not to exceed one year. Under special circumstances, a leave of absence may be approved for a maximum of two years. A student who fulfills the conditions of an approved leave of absence may register upon return without applying for re-enrollment. Once submitted, the leave-time periods are not permitted to be altered. A student is permitted to advance register for the semester in which he or she is returning. An application for leave of absence and additional information can be obtained from the student's college of enrollment and is processed at the college dean's office. The form is also available at www.registrar.psu.edu on the Web.

A student who wants to interrupt study at the University to study at another institution during a semester other than the summer may request a leave of absence for this purpose. It is not necessary to obtain a leave of absence if the period of study at another institution will be limited to the summer and the student returns for the fall semester. A student planning to study elsewhere should consult with his or her academic adviser to determine the applicability of such work to the program of study. In addition, the student should contact the Undergraduate Admissions Office to determine if transfer credit is possible. The student should be cognizant of the University regulations on residence requirements and of any special requirements of the particular major. When courses are completed at another institution and an evaluation for possible transfer credit is desired, an official transcript must be submitted directly to the Undergraduate Admissions Office by the registrar of the other institution. An evaluation fee of \$10 is required.

Application of Associate Degree Credits toward a Baccalaureate Degree

Students can begin most Penn State baccalaureate degree programs at any location. Depending on the final choice of major, degree (associate or baccalaureate), and location preference, students may stay at one campus throughout their entire Penn State experience or they may attend one campus for the first two years and then relocate.

Credits received for Penn State associate degree program courses may be applicable to a particular baccalaureate degree program listed in this bulletin at the discretion of the appropriate college and department. For information about offerings at Penn State campuses, see Penn State Degree Programs Summary on the Registrar's Web site:

<http://www.registrar.psu.edu/>

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Advanced Placement Program of the College Entrance Examination Board

THE ADVANCED PLACEMENT PROGRAM OF THE COLLEGE BOARD — The University cooperates with the College Board in this program. Credit may be awarded for Advanced Placement Examinations depending upon the grade earned on the examination and other factors as indicated in the following paragraphs.

A student who does advanced work in high school may take Advanced Placement Examinations that are based on college-level studies. For some examinations, the amount of credit awarded varies with an earned grade of three, four, or five. If credit is awarded, a student's University record will carry notation of credit, but no grade will be recorded. Credit acquired in this manner does not affect a student's grade-point average at the University.

Limitations of credit earned through the Advanced Placement (AP) Examinations are as follows:

1. Degree programs determine whether the credits earned may be used to meet degree requirements.
2. A student who has earned credit for a particular course through AP examinations may elect to take the same course at Penn State (unless restricted by placement policies of the unit offering the course), but the duplicate credit cannot be used to meet any additional degree requirements. However, the grade earned in the Penn State course will count towards the student's grade point average.
3. Credit(s) will be posted to the student's record but will not appear on the student's official transcript until the student has completed a credit-bearing course at Penn State.

General credit may be awarded for an AP examination covering material that is not the substantial equivalent of material covered in a specific University course. General credits may be used to fulfill degree requirements in any area; their use is not necessarily limited to general education or elective requirements. General credits are applied to a student's program of study in accordance with the procedures established by the college or other degree-granting unit of enrollment. Information about the use of general credits or specific course credits earned by AP examinations in individual programs of study may be obtained from a student's academic adviser or from the office of the dean of a student's college.

Undergraduate students interested in receiving credit for AP examinations should arrange for their official grade reports to be sent directly from Educational Testing Service (ETS) to the Undergraduate Admissions Office, The Pennsylvania State University, 201 Shields Building, Box 3000, University Park PA 16804-3000; which is responsible for evaluating such reports and awarding credit.

The schedule of credit awarded for AP examinations may be revised as a result of periodic review by the faculty.

Current information about advanced placement credit awarded by Penn State can be obtained from the Undergraduate Admissions Office, The Pennsylvania State University, 201 Shields Building, Box 3000, University Park PA 16804-3000; 814-865-5471; on the Web: [advanced placement opportunities](#)

The College-Level Examination Program of the College Board

The University cooperates with the College Board in this program, referred to as CLEP. Credit may be awarded for the CLEP examinations depending upon the score earned on the examination and other factors as indicated in the following paragraphs.

An undergraduate student who is a candidate for a degree at the University and who has earned a score equivalent to the fiftieth percentile or higher for performance on a CLEP examination, taken before or after admission to degree candidacy, may receive credit as indicated in the schedule of credits listed below. The student's University record will carry notation of credit, but no grade will be awarded.

Limitations of credit earned through the CLEP examinations are as follows:

1. Degree programs determine whether the credits earned may be used to meet degree requirements.
2. A student who has earned credit for a particular course through CLEP examinations may elect to take the same course at Penn State (unless restricted by placement policies of the unit offering the course), but the duplicate credit cannot be used to meet any additional degree requirements. However, the grade earned in the Penn State course will count towards the student's grade point average.
3. Credit(s) will be posted to the student's record but will not appear on the student's official transcript until the student has completed a credit-bearing course at Penn State.
4. The total number of credits that may be awarded from CLEP examinations is limited to 60 credits

General credit may be awarded for a CLEP examination covering material that is not the substantial equivalent of material covered in a specific University course. General credits may be used to fulfill degree requirements in any area; their use is not necessarily limited to General Education or elective requirements. General credits are applied to a student's program of study in accordance with the procedure established by the college or school of enrollment. Information about the use of general credits or specific course credits earned by CLEP examinations in individual programs of study can be obtained from a student's academic adviser or from the office of the dean of a student's college or school.

Undergraduate students interested in receiving credit for CLEP examinations should arrange for their official score reports to be sent directly from Educational Testing Service (ETS) to the Undergraduate Admissions Office, The Pennsylvania State University, 201 Shields Building, Box 3000, University Park, PA 16804-3000, which is responsible for evaluating such reports and awarding credit.

The schedule of credit awarded for CLEP examinations may be revised as a result of periodic review by the faculty.

Current information about CLEP credit awarded by Penn State can be obtained from the Undergraduate Admissions Office, The Pennsylvania State University, 201 Shields Building, Box 3000, University Park, PA 16804-3000; 814-865-5471. The schedule of credit awarded for CLEP examinations also can be obtained from the Undergraduate Admissions Office on the web:

[College-Level Examination Placement](#)

International Secondary Schooling and International Baccalaureate

International Secondary Schooling — A person who does advanced work in a secondary school in another country may receive consideration for transfer credit when the examinations taken are based on college-level studies.

Credit may be awarded for advanced work in international secondary schools. The World Education Series, published by the American Association of Collegiate Registrars and Admissions Officers, shall be used as a guide in making decisions on the awarding of credit for course work completed at an advanced level in international secondary schools. The number of credits awarded will reflect the introductory sequence in that subject at Penn State.

Limitations of credit earned through review of advanced-level international secondary schooling are as follows:

1. Degree programs determine whether the credits earned may be used to meet degree requirements.
2. A student who has earned credit for a particular course through advanced-level international secondary schooling may elect to take the same course at Penn State (unless restricted by placement policies of the unit offering the course), but the duplicate credit cannot be used to meet any additional degree requirements. However, the grade earned in the Penn State course will count towards the student's grade point average.
3. Credit(s) will be posted to the student's record but will not appear on the student's official transcript until the student has completed a credit-bearing course at Penn State.

A student interested in receiving credit for advanced-level international secondary schooling should arrange for an official grade report to be sent directly from the secondary school or the examining board to the Undergraduate Admissions Office. The Undergraduate Admissions Office is responsible for evaluating such reports and awarding credit.

If credit is awarded, the student's University record carries notation of credits, but no grade is recorded. Credit awarded in this manner does not affect the student's grade-point average at this university.

International Baccalaureate — A person who does work based on college-level studies in an International Baccalaureate program in a secondary school may take the Higher Level examinations.

Credit may be awarded for Higher Level examinations of the International Baccalaureate depending upon the grades earned on the examination. Subjects examined at the Higher Level with an earned grade of 5 or higher will be considered for transfer credit. The number of credits awarded will reflect the introductory sequence in that subject at Penn State.

Limitations of credit earned through the Higher Level examinations are as follows:

1. Degree programs determine whether the credits earned may be used to meet degree requirements.
2. A student who has earned credit for a particular course through International Baccalaureate examinations may elect to take the same course at Penn State (unless restricted by placement policies of the unit offering the course), but the duplicate credit cannot be used to meet any additional degree requirements. However, the grade earned in the Penn State course will count towards the student's grade point average.
3. Credit(s) will be posted to the student's record but will not appear on the student's official transcript until the student has completed a credit-bearing course at Penn State.

A student interested in receiving credit for the Higher Level examinations of the International Baccalaureate program should arrange for an official grade report to be sent directly from the secondary school to the Undergraduate Admissions Office. The Undergraduate Admissions Office is responsible for evaluating such reports and awarding credit.

If credit is awarded, the student's University record carries notation of credits, but no grade is recorded. Credit awarded in this manner does not affect the student's grade-point average at this university.

Credit By Examination

In some circumstances credits may be earned through successful completion of comprehensive examinations made available by the Penn State academic units that offer particular courses. When such an examination serves as a substitute for completing all the usual requirements of a Penn State course, the credits received are described as "Credit by Examination" and are accepted as fulfilling degree requirements. Students may initiate a request for Credit by Examination for a course, although the academic department or program offering the course determines whether it will make Credit by Examination available. A grade of "C" or higher must be earned in the examination for such credit to be awarded and to appear on the student's transcript. Credit by Examination does not result in a quality grade (A, A-, etc.) and is not included in the calculation of the student's grade point average. Any credits earned in this manner will appear on the student transcript with the notation CRX and without a reported grade. A fee may be assessed to cover the costs of the procedure.

Credit By Portfolio Assessment

A currently enrolled student who can document college-level learning acquired in a non-collegiate setting may be able to petition for undergraduate credit through portfolio assessment. Not all academic units offer portfolio assessment for credit. Students interested in determining whether to pursue credit by portfolio assessment opportunities should contact the academic department responsible for the relevant course.

Criteria for the award of credit via portfolio include:

Credit is granted for the demonstration of college-level learning obtained during work or other experience, but not for the experience itself. Learning must be documented and must represent college-level achievement. Advisers will provide guidance on the steps necessary to construct a portfolio providing evidence of prior learning that meets academic quality expectations.

Credit by portfolio assessment does not carry a grade. It may be awarded to enrolled students at the undergraduate level only.

Credit may not duplicate other course work that the student has already completed. A student may not enroll in and earn credit for a course for which credit already has been granted via portfolio assessment.

Credit may be awarded following an evaluation of the portfolio by an individual faculty member or by a team of faculty members and/or other selected personnel who represent the academic unit in which the subject matter is to be evaluated.

Credit earned via portfolio is designated on the transcript in the same manner as transfer credit. Credit(s) will be posted to the student's record but will not appear on the student's official transcript until the student has completed a credit-bearing course at Penn State.

A fee is assessed to recover portfolio evaluation costs. A maximum of 6 credits may be earned for a single portfolio (course). Associate degree candidates may be awarded a maximum of 16 credits. Baccalaureate degree candidates are limited to a maximum of 30 credits earned by portfolio assessment.

Placement Policy for Penn State World Language Courses

All students interested in studying a world language at Penn State may choose either to continue the language studied previously or to begin a new one. To continue with a language, students must follow the placement policy as outlined below.

Placement Policy — Students who have studied a world language within four years immediately before admission to Penn State may enroll in that language for credit based on the number of Carnegie units prior to admission. (A Carnegie "unit" refers to one course level of a world language — French 1, French 2, French 3, etc. — equivalent to one year of study and accredited as such by the school.) If a period of four or more years has elapsed between a student's graduation from high school and admission to college, he/she may be eligible to enroll in level 1 of the language studied in high school.

Units of Study Prior to Admission to Penn State	Register in Penn State Language Level
Fewer than two	Course Level 001 (4 cr.)
Two or three	Course Level 002 (4 cr.)
Four or more	Course Level 003 (4 cr.)

Students may choose to audit a lower-level course but may not receive credit for it. Students who feel they are qualified for a more advanced course, or students seeking proficiency certification or credit by examination, if available, should contact the appropriate language department for details. For more information, see [College of the Liberal Arts policies](#).

Non-Course Work Knowledge of World Languages — Students who have acquired a knowledge of a world language by means other than course work (e.g., family background, travel or study in a foreign country, participation in noncredit summer language programs, etc.) may enroll in elementary and intermediate courses in that language only with permission of the course coordinator or department head. Once students have been placed in a skills course, they may not receive credit for a lower-level skills course.

Students whose native language is not English may not receive credit (through course work or examination) for elementary and intermediate courses in their native language. Enrollment in skills courses beyond intermediate level (e.g., conversation, composition) must be approved by the department head.

Accelerated and Intensive Courses — Students may choose to enroll in accelerated courses such as French 111 and 112, German 011 and 012, or in Penn State's Summer Intensive Language Institute courses. Because the objectives of these courses are somewhat different, students may schedule them for full credit even if they have studied the language previously.

Credit by examination (fee charged), when available, is offered to the extent allowed by the placement policy. For example, a student who has two units of secondary school foreign language and chooses to begin study of that language at the third level instead of the second (Course Level 003, 4 cr.), may receive credits for the second level (Course Level 002, 4 cr.), but not for the first level (Course Level 001, 4 cr.). See the appropriate department for details.

Questions — Questions should be addressed to the course coordinator or department head of the particular language department concerned.

Environmental Emphasis Programs

The University offers a wide range of opportunities in undergraduate programs with environmental emphasis. Programs with an emphasis on the natural world include:

- Agriculture (various fields)
- Biology (various fields)
- Earth Sciences
- Environmental Engineering
- Environmental Systems Engineering
- Geography
- Geosciences
- Meteorology

Programs stressing human use of and impact on the natural world are offered individually or jointly by various colleges. Descriptions of individual programs and related courses emphasizing study in environmental areas can be found under these listings:

College of Agricultural Sciences

- Agricultural and Extension Education, Environmental Science option
- Agroecosystems Science
- Environmental and Renewable Resource Economics
- Environmental Resource Management
- Environmental Soil Science
- Forest Science
- Landscape Contracting
- Wildlife and Fisheries Science

Penn State Altoona

- Environmental Studies

College of Arts and Architecture

School of Architecture and Landscape Architecture:

- Architecture
- Landscape Architecture

College of Earth and Mineral Sciences

- Climatology
- Earth Sciences
- Earth Systems
- Energy, Environmental, and Mineral Economics
- Environmental Systems Engineering
- Geography
- Geosciences
- Industrial Health and Safety
- Materials Science and Engineering
- Mining Engineering
- Petroleum and Natural Gas Engineering
- Watersheds and Water Resources

College of Education

- Environmental Education Teacher Certificate (contact 228 Chambers Building, University Park campus)

College of Engineering

- Aerospace Engineering
- Agricultural and Biological Engineering
- Architectural Engineering–Environmental Option
- Chemical Engineering
- Civil and Environmental Engineering
- Electrical Engineering
- Engineering Science
- Industrial and Manufacturing Engineering
- Mechanical and Nuclear Engineering
- Science, Technology, and Society

College of Health and Human Development

- Recreation and Park Management

Intercollege Undergraduate Programs

- Environmental Inquiry
- Marine Sciences

Intercollege Undergraduate Programs

Intercollege undergraduate programs draw on the resources of faculty and courses from several colleges and academic units within the University. Descriptions of these programs can be found under [Intercollege Programs](#) in this bulletin.

International Programs

For information about Global Penn State, see <https://global.psu.edu/>

Penn State Learning

For information, see
pennstatelearning.psu.edu

Reserve Officers' Training Corps

A student may select Reserve Officers' Training in the Army, Navy, Marine Corps, or Air Force. Subject to the specific requirements of the service chosen, the student selects courses in military, naval, or air science. University credit is given for these courses. In accordance with academic rules, a minimum of 6 credits earned in ROTC courses apply toward graduation requirements in any baccalaureate program. Additional ROTC credits may be applied toward graduation according to the policy of the college or degree-granting unit in which the candidate is enrolled. In many programs, the category to which ROTC credit may be applied is clearly stated. In programs where the category is not predetermined, the student's adviser and the student decide which credits the ROTC credits will replace. There is no military service obligation during the first year of the program regardless of scholarship status. Sophomore students have no obligation unless they are on a military scholarship. For more informatin, see: <http://undergrad.psu.edu/rotc.html>

Teacher Education Programs

For current information about teacher certification for teacher education programs, see: <http://ed.psu.edu/certification>

Washington Program

For information, see

<http://comm.psu.edu/current/washington-program>

Adult Learner Services, Center for

For information, see

<http://www.outreach.psu.edu/adult-learners>

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Athletics and Recreation

For information, see <http://admissions.psu.edu/life/>

Career Services

For information, see
studentaffairs.psu.edu/career

Counseling and Psychological Services, Center for (CAPS)

For information, see
<http://www.sa.psu.edu/caps>

Disability Services, Office for

For information, see
<http://www.equity.psu.edu/ods>

Ethics and Religious Affairs, Center for

For information, see
studentaffairs.psu.edu/spiritual

Fraternity and Sorority Life

For information, see

studentaffairs.psu.edu/hub/greeks

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Health Services, University

For information, see
studentaffairs.psu.edu/health

Honor and Professional Societies

For a list of academic/professional and honor societies, see <https://studentaffairs.psu.edu/hub/studentorgs/orgdirectory/>

Information Technology Services

Information Technology Services (ITS) ensures that faculty, students, and staff have the information technology tools and infrastructure necessary to carry out the University's mission. ITS is working to achieve five broad goals: help faculty improve the way education is delivered; provide students with resources to enrich their educational experience; create and sustain an environment that enables leading-edge research; help to improve productivity; and establish the information technology infrastructure necessary to maintain Penn State's prominence in integrating high-quality programs in teaching, research, and outreach. For additional information, see its.psu.edu on the Web.

Multicultural Resource Center

For information, see
<http://www.equity.psu.edu/mrc>

Paul Robeson Cultural Center

For information, see
studentaffairs.psu.edu/cultural

Residence Life

For information, see <http://studentaffairs.psu.edu/reslife/>

Student and Family Services

For information, see <http://studentaffairs.psu.edu/familyservices/>

Student Organizations

For information, see: <http://www.clubs.psu.edu>

Unions and Student Activities

For information, see
studentaffairs.psu.edu/hub

University Registrar, Office of

For information, see
<http://www.registrar.psu.edu/>

Veterans Programs, Office of

For information, see

<http://www.equity.psu.edu/veterans>

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Women in the Sciences and Engineering (WISE) Institute

For information, see

<http://www.equity.psu.edu/wise>

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Women Students, Center for

For information, see

studentaffairs.psu.edu/womenscenter

Residency Classification for Tuition Purposes

Effective March 1, 2015

PENNSYLVANIA CLASSIFICATION

A student shall be classified as a Pennsylvania resident for tuition purposes if that student has a Pennsylvania domicile and that student's presence in Pennsylvania is not primarily for educational purposes. Domicile is a person's existing and intended fixed, permanent, and principal place of residence. A student whose presence in the Commonwealth is primarily for educational purposes shall be presumed to be a non-Pennsylvania resident for tuition purposes. Thus, most non-residents who come to Pennsylvania for the primary purpose of attending the University will ordinarily continue to be classified as non-residents for purposes of tuition throughout their attendance at the University. The following are considerations that may be used by the University in determining whether a student is a resident for tuition purposes:

1. A student under the age of 21 is presumed to have the domicile of his/her parent(s) or legal guardian(s), unless the student has maintained continuous residence in the Commonwealth for other than educational purposes for a period of at least 12 months immediately prior to his/her initial enrollment at The Pennsylvania State University, and, the student continues to maintain such separate residence.
2. A student who has resided in the Commonwealth for other than educational purposes for at least a period of 12 months immediately preceding his/her initial enrollment at The Pennsylvania State University is presumed to have a Pennsylvania domicile.
3. A student who has not resided continually in Pennsylvania for a period of 12 months immediately preceding his/her initial enrollment at The Pennsylvania State University is presumed to have a non-Pennsylvania domicile.
4. A student requesting to be classified as a Pennsylvania resident for tuition purposes must be a citizen of the United States or a permanent resident. Permanent residents must have received the I-551 stamp approving their permanent resident status. An individual in a nonimmigrant status with the USCIS is not eligible for classification as a Pennsylvania resident for tuition purposes. Other extraordinary circumstances, which may qualify a student as a Pennsylvania resident for tuition purposes, will be considered on a case-by-case basis.
5. A United States government employee or member of the armed forces who was a resident of Pennsylvania immediately preceding his/her entry into government service and who has continuously maintained Pennsylvania as his/her domicile will be presumed to have a Pennsylvania domicile.
6. Military personnel and their dependents who are assigned to an active duty station in Pennsylvania and who reside in Pennsylvania shall be charged in-state tuition rates.
7. A student receiving a scholarship, guaranteed loan, grant, or other form of financial assistance dependent upon residence in a state other than Pennsylvania is not a Pennsylvania resident for tuition purposes.

RECLASSIFICATION AS PENNSYLVANIA RESIDENT

A student requesting reclassification as a Pennsylvania resident for tuition purposes must demonstrate by clear and convincing evidence that his/her domicile is in Pennsylvania, and that his/her presence in Pennsylvania is not primarily for educational purposes. Each request shall be decided individually on the basis of all facts submitted by the petitioner. Accordingly, it is not possible to list a specific combination of factors or set of circumstances which, if met, would ensure reclassification for tuition purposes.

RECLASSIFICATION PROCEDURE

1. A student may challenge his/her residence classification by filing a written petition with the person or committee designated to consider such challenges at the University. Such person or committee shall consider such petition and render a timely decision that shall constitute an exhaustion of administrative remedies.
 - a. The University reserves the right to require transcripts of tax filings from the Internal Revenue Service or Commonwealth of Pennsylvania rather than taxpayers' copies of those returns and also to require notarized statements as needed.
2. Any reclassification resulting from a student's challenge or appeal shall be effective at the beginning of the semester or session during which the challenge or appeal was filed or at the beginning of the following semester or session. The decision as to which semester or session becomes the effective date shall rest with the person or committee rendering the decision on reclassification.
3. A student who changes his/her place of residence from Pennsylvania to another state is required to give prompt written notice of this change to the University and shall be considered for reclassification as a non-Pennsylvanian for tuition purposes effective with the date of such change.
4. A dependent resident student whose parent(s) or legal guardian(s) move outside of the Commonwealth may remain a Pennsylvania resident for tuition purposes if he/she continues to maintain a separate domicile within the Commonwealth.

NONRESIDENT STUDENT CLASSIFICATION

1. A student is initially classified as a nonresident based on information provided by the student when applying for admission to the University. The initial classification is made as follows:
 1. Undergraduate Student
 1. Penn State Harrisburg — Penn State Harrisburg Academic Services Officer
 2. All other locations — Undergraduate Admissions Office, The Pennsylvania State University, University Park, PA 16804-3000
 2. Graduate Student

1. Penn State Harrisburg — Penn State Harrisburg Academic Services Officer
2. All other locations — Dean of the Graduate School
3. Medical Student
 1. Office of Student Affairs, The Milton S. Hershey Medical Center
2. A student may challenge his/her residency classification by filing a written petition as follows:
 1. Undergraduate Student
 1. Penn State Harrisburg — Penn State Harrisburg Financial Officer
 2. All other locations — Residency Appeal Officer, University Park
 2. Graduate Student
 1. Penn State Harrisburg — Penn State Harrisburg Financial Officer
 2. All other locations — Residency Appeal Officer, University Park
 3. Medical Student
 1. Controller, The Milton S. Hershey Medical Center
3. The appropriate University official reviews the student's petition and makes a decision.
4. The student may appeal that officer's residency decision to the University Appeals Committee on Residence Classification having representation from the Corporate Controller's Office, Undergraduate Admissions Office, and the Graduate School. The committee's decision on appeal shall be final.

FALSE STATEMENTS

Any student who provides false or misleading information or deliberately conceals or omits relevant facts in connection with a residency application or appeal will be subject to disciplinary action. In addition, such students will be subject to retroactive reclassification as a non-residents and will be responsible for the payment of non-resident tuition and fees for the period during which he/she was classified as a resident.

PLEASE NOTE: A page of frequently asked questions concerning residency classification for tuition purposes can be found at <http://www.bursar.psu.edu/faq.cfm>

Insurance Protection

For information about student health insurance protection, See:
studentaffairs.psu.edu/health/services/insurance

Registration

Dates for advising, registration, and classes are given in the [University academic calendar](#). Registration information for Continuing Education courses is available from the Continuing Education office at each campus or service area. Students with an active University Access Account register through [LionPATH](#). Schedules at campuses other than University Park may vary. Check the website for the campus you're interested in for specific schedules.

Grading System

See: http://www.registrar.psu.edu/grades/grading_system.cfm

Policies and Rules

It is the responsibility of students to be familiar with the rules, regulations, and procedures of the University. Policies and Rules includes information on academic procedures, code of conduct, general University policies, privacy rights of students, and responsibilities for community living. Paper copies of the Student Guide to General University Policies and Rules are available from the information desk in the HUB-Robeson Center and from each college dean's office at University Park campus and the Office of Student Affairs at other campuses. See the [Office of Student Conduct](#) website for more information.

For academic policies and rules, see
<http://www.senate.psu.edu/policies>

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Requirements for Graduation

To graduate, a candidate must complete the course requirements for the candidate's major and:

1. earn at least a C (2.00) cumulative grade-point average for all courses taken at the University;
2. earn at least a C grade in each major course designated by the major as a C-required course.

Residence Required for Degree

Every candidate for a degree shall earn as a degree candidate at least 36 of the last 60 credits for a baccalaureate degree and at least 18 of the last 30 credits for an associate degree in courses offered by the University or in cooperative degree programs established by formal agreement and approved by the University Faculty Senate.

A candidate for a first baccalaureate degree shall earn the last 60 credits required for that degree within five calendar years. An extension of time shall be granted for intervening military service.

A course schedule, including courses offered by resident education or Continuing Education, is made by each student.

A typical credit load for a full-time student is defined to be from 12 to 19 credits per semester. Students are not permitted to advance register or register in the normal registration period for more than 19 credits. Students are permitted to add courses beyond this maximum 19 credits after consultation with the adviser during the first ten calendar days of the semester.

Planning a Degree Program

Primary responsibility for the successful completion of a degree program lies with the student. The key to meeting this responsibility is personal involvement in academic program planning. To plan a program of study that will best meet individual goals and interests, students must know the requirements and restrictions of the department, college or other degree-granting unit, and the University; know the sources of academic information; work closely with an adviser in examining programs and course requirements and alternatives; and consult the Undergraduate Degree Programs Bulletin.

The University comprises a [family of campuses located throughout the Commonwealth](#). For most degree programs, a student may begin his or her studies at any one of the campuses. More than 160 baccalaureate majors, more than 25 associate degree majors, and more than 7,000 undergraduate courses are offered by the University. Clearly, each campus cannot offer every academic program or every course. As a result, admission to several academic programs is restricted, and students selecting these programs may be required to begin their studies at a specified campus. In other cases, admission to certain academic programs must be approved when a first-year student enters the University; transfer into these programs at a later point in a student's career is not possible. For these reasons, it is imperative that a student understand both program and course limitations at the campus of enrollment.

The many programs at Penn State allow varying degrees of flexibility. An early decision to pursue a highly structured program enables the student to complete the program in the optimum length of time by taking the required courses in a sequence that allows the smoothest progression from one level to the next. Even the most regulated programs, however, allow choices within given boundaries. Other programs allow a considerable range of choices in the completion of the requirements. Students should be aware of possible difficulties in transferring from a flexible program to a more highly structured program. Whether a program is highly structured or quite flexible, it is extremely important that the student understand program requirements when enrolling in the University.

Information concerning the University, its academic programs, course offerings, campuses, and academic organization is available from the following sources:

NEW STUDENT ORIENTATION--Penn State provides all new students the opportunity to attend a comprehensive orientation program, which is organized by the Office for Student Orientation and Transition Programs (SOTP). SOTP partners with the Division of Undergraduate Studies and other units to offer new students a thorough introduction to life on campus, an overview of General Education requirements, and the opportunity to actively discuss individual academic plans with an academic adviser. In addition to registering students for classes, the overall objective of [New Student Orientation](#) is to establish the academic expectations and community standards that shape and inform the learning environment at Penn State.

INFORMATION FOR NEW STUDENTS--The Office for Student Orientation and Transition Programs provides first-year students, advanced standing, and change-of-campus students at the University Park campus with comprehensive information regarding the essential academic and student development opportunities of the campus and the University in general beginning with a new student's acceptance to a campus and continuing through completion of his/her first semester.

Through programs offered in cooperation with the colleges' academic units and various student service operations, new students are introduced to the intellectual and scholarly expectations of the University, to the skills needed for advanced study and lifelong learning, and to the student development opportunities with academic merit. In addition, this office helps inform students of the required procedures for matriculation and offers a perspective on college life, including practical information about important dates, times, and locations (e.g., arrival day, first day of classes, course drop/add).

During Welcome Week each semester, new students receive instruction and advice about their courses of study, including help with registration and class schedule adjustments, and they participate in special activities.

ACADEMIC ADVISERS--Each student is assigned a primary academic adviser in his or her college, school, or the Division of Undergraduate Studies. Students can find their adviser's name and contact information using the [Academic Advising Portal](#). The adviser is available to help a student plan an academic program, schedule each semester's courses, and provide information about majors. The adviser will also refer a student to other appropriate sources of information.

ACADEMIC ADVISING CENTERS--Academic advising centers are located in every college at University Park and at all other Penn State undergraduate locations. Centers provide advising and information about academic programs. Lists of University Park centers and centers at other locations are available online. University Park: <http://handbook.psu.edu>; other locations: http://dus.psu.edu/advisers/advising_centers.html.

WEBSITES--[Penn State's home page](#) provides access to information about the University and each of its colleges.

COURSE OFFERINGS--[Course offerings](#) and [registration information](#) are available online through LionPATH.

Academic Definitions

The following definitions, referring to degrees, majors, options, minors, concurrent or sequential majors programs, and integrated undergraduate-graduate degree programs, have been adopted by the University Faculty Senate:

Associate Degree--Two-year majors that, with a few exceptions, provide concentrated instruction to prepare graduates for specialized occupational assignments.

Baccalaureate Degree--An award signifying a rank or level of educational attainment. Particular types of baccalaureate degrees identify educational programs having common objectives and requirements. Degree programs may provide academic, preprofessional, or professional experiences and preparation. Majors lead to a baccalaureate degree. Each student must select a major within a baccalaureate degree type. If options are offered within a major, a student selects one. The student may also elect to enroll in a minor to supplement the major. Alternatively, the student may seek to enroll in multiple majors within the same type of baccalaureate degree or to enroll in a simultaneous degree program. A baccalaureate program of study shall consist of no less than 120 credits. Students may elect to take courses beyond the minimum requirements of a degree program.

Major--A plan of study in a field of concentration within a type of baccalaureate degree. Colleges and other degree-granting units may have common requirements for all of their majors. Each major may have requirements identified in Prescribed, Additional, and Supporting Courses and Related Areas categories. Elective credits are not considered part of the major. (Senate Record:1/23/90, Appendix IV)

Option--A specialization within a major that should involve at least one-third of the course work credits required for the major, but need not be more than 18 credits. All options within a major must have in common at least one-fourth of the required course work credits in the major. A student can only be enrolled in an option within his/her own major.

Minor--A minor is defined as an academic program of at least 18 credits that supplements a major. A minor program may consist of course work in a single area or from several disciplines, with at least 6 but ordinarily not more than half of the credits at the 400 course level. Total requirements are to be specified and generally limited to 18 to 21 credits. Entrance to some minors may require the completion of a number of prerequisites, including courses, portfolios, auditions, or other forms of documentation that are not included in the total requirements for the minor. All courses for a minor require a grade of C or above.

Concurrent and Sequential Majors Programs--At the baccalaureate or associate degree level, students may be approved for admission to more than one major under the Concurrent Majors Program. A Concurrent Majors Program is one in which students take courses to concurrently meet the requirements of at least two majors, with graduation for all majors in the program occurring during the same semester. Concurrent majors must all be at the baccalaureate or associate degree level. Under the Sequential Majors Program, upon graduation from an associate or baccalaureate degree program, a student may apply for re-enrollment in another undergraduate degree program.

Integrated Undergraduate-Graduate (IUG) Degree Program--An integrated undergraduate-graduate (IUG) degree program combines a Penn State baccalaureate degree with a master's degree as a continuous program of study. An IUG program allows qualifying students to:

- Create a cohesive plan for baccalaureate and master's degree studies, with advising informed by requirements for both degree programs
- Complete the combined degree program in less time than it would take to complete each program separately
- Become familiar with the expectations of graduate studies in their programs
- Access the resources of the Graduate School
- Learn from current graduate students who share academic interests

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Baccalaureate Degrees Granted

Undergraduate majors offered at Penn State lead to one or more of the following baccalaureate degrees: Bachelor of Arts, Bachelor of Science, Bachelor of Architectural Engineering (five-year program), Bachelor of Architecture (five-year program), Bachelor of Design, Bachelor of Fine Arts, Bachelor of Humanities, Bachelor of Landscape Architecture (five-year program), Bachelor of Music, Bachelor of Musical Arts, and Bachelor of Philosophy. Not all degrees are offered at every location. Baccalaureate degrees offered at Penn State include both those that are designed to provide an academic (including preprofessional) experience and those that are specifically designed to provide professional preparation. To ensure excellence, all professionally oriented degree majors provide a strong academic base. The Bachelor of Arts degree (with a given major) is an academic degree; the Bachelor of Science degree (with a given major) and the bachelor's degree in any subject area (e.g., Bachelor of Architecture) are professional degrees. The Bachelor of Philosophy degree, described in the Intercollege Undergraduate Programs section of this bulletin, is planned individually and may be designed to serve either academic or professional purposes.

BACHELOR OF ARTS-- See
[Bachelor of Arts Degree Requirements](#).

BACHELOR OF HUMANITIES--Bachelor of Humanities degree majors are required to take 18 credits (referenced below). In addition, students are expected to complete credits required by their college and major.

PRESCRIBED COURSES: 6 credits
HUM 300W(3) and HUM 400(3)

SUPPORTING COURSES AND RELATED AREAS: 12 credits

Select 1 course each from four different major/program offerings:

A&A, AMST, ART, ART H, CAMS, COMM, CMLIT, ENGL, HIST, INART, MUSIC, PHIL, RL ST, THEA, or courses from the School of Humanities (Penn State Harrisburg, the Capital College) approved list.

BACHELOR OF PHILOSOPHY--The Bachelor of Philosophy degree is the only one not offered through any college or school but rather on a University-wide basis. This degree allows students to plan their own programs, in conjunction with a faculty preceptor, within the framework of the academic program of the University. A description of this degree is found in the Intercollege Undergraduate Programs section of this bulletin.

B.A. Degree Requirements: Foreign Language

20 Courses

ARAB 003

Intermediate Modern Standard Arabic (4) More complex grammatical forms; vocabulary building principles; continued development of skills in conversation, reading, writing; culturally-oriented readings and films.

Effective: Summer 2010

Prerequisite: ARAB 002

CHNS 003

Level Two Chinese A (4) Continued audio-lingual practice of Mandarin Chinese, more extensive practice in reading and writing; study of Chinese culture.

Effective: Spring 2011

Prerequisite: CHNS 002

FR 003

Intermediate French (4) Grammar, reading, composition, oral and aural exercises.

Effective: Fall 1985

Prerequisite: FR 002

FR 112

Intermediate French (6) Reinforcement of basic skills previously acquired in the active use of French in FR 111.

Effective: Fall 1983

GER 003

Intermediate German (4) Continued four-skill development with increased emphasis on reading, writing, and grammatical accuracy; culturally-oriented reading selections and videos. Students may receive credit for only one of the following: GER 003 or GER 008.

Effective: Summer 1994

Prerequisite: GER 002

GER 012

Intensive Intermediate German (6) Continued skill development of structures and vocabulary; listening, speaking, reading, writing. Taught on an accelerated basis. Students may receive credit for only one of the following: GER 002, 003, 012, or 016.

Effective: Fall 1983

Prerequisite: GER 011

HEBR 003

Intermediate Modern Hebrew (4) Grammar, reading, composition, and oral and aural exercises.

Effective: Summer 1977

Prerequisite: HEBR 002

HINDI 003

Level Two Hindi A (4) This is an intermediate level course in Hindi that seeks to improve student's skills in oral and written expression.

Effective: Summer 2010

Prerequisite: HINDI 002 or equivalent competency

IT 003

Intermediate Italian (4) Advanced grammar; oral and written composition; reading of modern authors; Italian life and culture.

Effective: Winter 1978

Prerequisite: IT 002

IT 010

Intensive Elementary Italian (6) Intensive Italian basic reading, writing, listening, and speaking skills stressed. Lab.

Equivalent to IT 001 and half of IT 002.

Effective: Spring 2005

IT 020

Intensive Intermediate Italian (6) Continuation of Intensive Elementary Italian, building on grammar and communication skills (reading, writing, listening, and speaking).

Effective: Summer 2004

Prerequisite: IT 010

JAPNS 003

Level Two Japanese A (4) Continued study of modern Japanese at elementary level; extensive audio-lingual practice for conversational fluency; reading/writing original scripts.

Effective: Spring 2011

Prerequisite: JAPNS 002

KOR 003

Level Two Korean A (4) Further development of listening, speaking, reading, writing skills in Korean; cultural elements.

Effective: Spring 2011

Prerequisite: KOR 002

LATIN 003

Intermediate Latin (4) Selected readings from representative authors.

Effective: Winter 1978

Prerequisite: LATIN 002

PORT 003

Intermediate Portuguese (4) Grammar, reading, composition, and conversation.

Effective: Winter 1978

Prerequisite: PORT 002

RUS 003

Intermediate Russian (4) Emphasis on reading unsimplified texts; composition; grammatical analysis.

Effective: Fall 1985

Prerequisite: RUS 002

SPAN 003

Intermediate Spanish (4) Audio-lingual review of structure; writing; reading.

Effective: Fall 1985

Prerequisite: SPAN 002

SPAN 020

Intensive Spanish (6) Basic and intermediate Spanish grammar, oral, aural, and writing skills (essentially equivalent to second half of SPAN 002 and all of SPAN 003).

Effective: Fall 1988

Prerequisite: SPAN 010

SWA 003

Intermediate Swahili (4) Further development of listening, speaking, reading, and writing skills in Swahili: structures and vocabulary; cultural elements.

Effective: Spring 1995

Prerequisite: SWA 002

UKR 003

Intermediate Ukrainian (4) Reading, writing, and speaking Ukrainian.

Effective: Summer 1991

Prerequisite: UKR 002

B.A. Degree Requirements: Arts

496 Courses

A ED 211 (GA)

Interpreting Art Experience: Social and Behavioral Perspectives (3) Examination of psychological, cultural, aesthetic, philosophical and educational perspectives on creation and response to art in children, adolescents and adults.

Effective: Summer 2002

A ED 225 (GA;US)

Diversity, Pedagogy, and Visual Culture (3) Issues of diversity in art, education, visual culture, and pedagogy.

Effective: Summer 2005

A&A 100 (GA;IL)

Introduction to International Arts (3) An interdisciplinary, multicultural introduction to the arts of the world.

Effective: Summer 2005

A&A 121 (GA)

Design Thinking and Creativity (3) An introductory and multidisciplinary exploration of the theory, process, methods, and artifacts of design, achieved through an examination of ideas, examples, and applications.

Effective: Summer 2015

A&A 322

Arts Marketing (3) Topics include: arts markets, consumptions models, targeted development of aesthetic products, analysis of websites and other marketing materials that communicate artistic value.

Effective: Summer 2015

Prerequisite: third-semester standing

A&A 401

International Arts Minor Final Project (1-3) The final project required for the International Arts Minor.

Effective: Summer 2004

Prerequisite: A&A 100 and completion of at least 12 credits toward the International Arts Minor

AF AM 208 (THEA 208) (GA;US;IL)

Theatre Workshop in Diverse Cultures (3) A performance-oriented class which explores the historic and contemporary theatrical works of various culturally diverse peoples.

Effective: Spring 2013

AFR 335 (ART H 335) (IL)

African Art (3) Introduction to the visual arts of Africa, including contemporary African art and the influence of African art outside Africa.

Effective: Fall 2013

AFR 446 (ART H 446) (IL)

Topics in African Art (3 per semester/maximum of 9) Topics vary from "Arts of Eastern and Southern Africa" to "Art of West Africa."

Effective: Spring 2014

Prerequisite: 3 credits of Art History

AFR 447 (ART H 447) (IL)

Topics in the Art of the African Diaspora (3 per semester/maximum of 6) Selected topics in arts of the African Diaspora (South America, Caribbean, USA) including masquerades, textiles, architecture and other art forms.

Effective: Spring 2014

Prerequisite: 3 credits of Art History

AM ST 307 (ART H 307) (GA;US)

American Art (3) History of art in the English colonies and the United States from the seventeenth century to the present.

Effective: Spring 2008

AM ST 308 (ART H 308) (GA;US)

American Architecture (3) History of the architecture of the United States, as well as its Native American and colonial antecedents.

Effective: Summer 2013

ARAB 401 (IL)

Advanced Language & Cultures I (3) Fifth-semester Modern Standard Arabic: reading more complex texts, films, further development of conversation, composition skills, Arab cultures, current issues.

Effective: Spring 2008

Prerequisite: ARAB 110 or approval of program

ARAB 402 (IL)

Advanced Language & Cultures II (3) Sixth-semester Modern Standard Arabic: reading more complex texts, films, further development of conversation, composition skills, Arab cultures, current issues.

Effective: Spring 2008

Prerequisite: ARAB 401 or approval of program

ARCH 210 (GA)

Introduction to Architecture and Planning Theories (3) The course introduces architectural and urban theory by

presenting and exploring key concepts through major texts from the Western tradition.
Effective: Spring 2009

ARCH 211 (GA)

Contemporary Design and Planning Theories II (3) Continuation of ARCH 210, with an in-depth analysis and study of significant and current environmental constructs and issues.

Effective: Summer 1995

Prerequisite: ARCH 210

ARCH 316 (GA)

Analysis of Human Settlements: Cities (3) Analysis of the interrelated factors which determined and shaped the various types of early cities through the nineteenth century.

Effective: Summer 1989

ART 001 (GA)

Introduction to the Visual Arts (3) Introduction to the media, elements, function, making, and meaning of visual arts today and in diverse historical and cultural contexts.

Effective: Spring 2004

ART 002 (GA)

Interactive Learning and Web-Design (3) Introduce students to research on-line, preparing verbal, visual and other elements for presentation of outcomes and posting them to the Internet.

Effective: Fall 2001

ART 003 (GA)

Visual Images on the Web (3) Introduce students to using visual images for communication on the World Wide Web.

Effective: Fall 2001

ART 010 (GA)

Introduction to Visual Studies (3) Introduction to visual studies; pictorial space and the principles of visual organization.

Effective: Fall 2004

ART 017 (GA)

Introduction to Metal Arts (3) Introduction for non-art majors to fundamental jewelry making and small-scale metalsmithing processes including fabrication, surface treatment, and finishing of metalwork.

Effective: Spring 2004

ART 020 (GA)

Introduction to Drawing (3) Introductory experience in making of art through drawing media; designed for non-majors seeking general overview of studio practice.

Effective: Spring 2004

ART 030 (GA)

Introduction to Sculpture (3) Introduction to sculpture for non-art majors consisting of lectures/basic studio work coordinated to cover broad range of processes.

Effective: Fall 2004

ART 040 (GA)

Introduction to Printmaking (3) Instruction and practice in elementary printmaking and papermaking processes.

Effective: Fall 2004

ART 050 (GA)

Introduction to Painting (3) Introductory experience in making of art through painting media; designed for non-majors seeking a general overview of studio practice.

Effective: Fall 2004

ART 080 (GA)

Introduction to Ceramics (3) Introduction to the concepts and techniques fundamental to the making of pottery and ceramic sculpture.

Effective: Spring 2004

ART 098

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Summer 1994

ART 100 (GA)

Concepts and Creation in the Visual Arts (3) A study of the personal and cultural foundations of artistic creation and practice of creative production in the art studio.

Effective: Spring 2004

ART 101 (GA)

Introduction to Web Design (3) A beginning level course in Web Design, with emphasis on designing with standards to assure accessibility and effective communication.

Effective: Spring 2008

ART 110

Ideas as Visual Images (3) Introduction to the ideational relationships among subject, form, and content in visual images.

Effective: Fall 2016

ART 111

Ideas as Objects (3) An introduction to the relationship between ideas and the creation of three-dimensional objects.
Effective: Fall 2016

ART 122Y (US)

Commentary on Art (3) An introduction to verbal commentary, both oral and written, about art. The development of critical and expressive skills given emphasis.
Effective: Spring 2006

ART 198

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.
Effective: Summer 1994

ART 199 (IL)

Foreign Studies--Art (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ART 201

Intro to Digital Arts: Computer Graphics (3) Art 201 is a course introducing digital art, design, and new media concepts using graphic applications on the computer.
Effective: Spring 2008

ART 202

3D Design Fundamentals (3) This course introduces students to foundational skills for producing images, videos, objects, and interactive real-time virtual spaces with 3D software.
Effective: Summer 2016

ART 203

The Art of Web Design (3) This course will focus on utilizing graphic formats ideal for web-based work and designing with web standards.
Effective: Spring 2011

ART 204

Animation Fundamentals (3) This course provides foundational knowledge for creating animated works that communicate ideas, enhance user interaction, and inspire critical reflection.
Effective: Summer 2016

ART 211 (US)

Introduction to Digital Art and Design Criticism (3) An introduction to the language, aesthetics and cultural impacts of digital art and design in contemporary society.
Effective: Fall 2007

ART 211Y (US)

Introduction to Digital Art and Design Criticism (3) An introduction to the language, aesthetics, and cultural impacts of digital art and design in contemporary society.
Effective: Spring 2010

ART 217

Metal Art/Technology I (3) Introduction to current and emerging metal art technologies and processes as medium for conceptual, aesthetic, and functional artworks.
Effective: Spring 2009
Prerequisite: ART 110S ART 111 and enrollment in the School of Visual Arts or successful completion of an admissions portfolio review

ART 220

Figure Drawing (3) Drawing from life. Emphasis on developing the ability to comprehend and record the human figure.
Effective: Spring 2009
Prerequisite: ART 110S ART 111 and enrollment in the School of Visual Arts or successful completion of an admissions portfolio review

ART 223

Drawing: Techniques, Materials, and Tools (3) Drawing with an emphasis on organization and the development of drawing skills through a variety of techniques, materials, and tools.
Effective: Spring 2009
Prerequisite: ART 110S ART 111 and enrollment in the School of Visual Arts or successful completion of an admissions portfolio review

ART 230

Beginning Sculpture (3) An introduction to sculpture consisting of lectures, demonstrations, and basic studio work coordinated to cover a broad range of processes.
Effective: Spring 2009
Prerequisite: ART 110S ART 111 and enrollment in the School of Visual Arts or successful completion of an admissions portfolio review

ART 240

Beginning Printmaking (3) An introduction to printmaking consisting of lectures, demonstrations, and studio work to cover a broad range of processes.
Effective: Spring 2009
Prerequisite: ART 110S ART 111 and enrollment in the School of Visual Arts or successful completion of an admissions portfolio review

portfolio review

ART 250

Beginning Oil Painting (3) The materials and techniques of painting in oil and their uses in creative painting on panels and canvas.

Effective: Spring 2009

Prerequisite: ART 110S ART 111 and enrollment in the School of Visual Arts or successful completion of an admissions portfolio review

ART 280

Beginning Ceramics (3) The fundamentals of ceramics, throwing, hand-building, and glazing; acquainting the student with ceramic materials, techniques, and philosophy.

Effective: Spring 2009

Prerequisite: ART 110S ART 111 and enrollment in the School of Visual Arts or successful completion of an admissions portfolio review

ART 290

Beginning Photography (3) Fundamental techniques and approaches to the art of photography utilizing digital photographic technologies; digital camera required.

Effective: Spring 2003

ART 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

ART 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

ART 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Summer 1994

ART 299 (IL)

Foreign Study--Art (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ART 300

Studio Apprenticeship (1-4 per semester/maximum of 8) Direct involvement in the creative process of the artist-teacher in the studio environment.

Effective: Fall 1993

Prerequisite: fifth-semester standing

ART 314

Computer 3-D: Modeling, Rendering, and Animation (4 per semester/maximum of 12) A studio course introducing 3-d computer generated artwork and content creation using modeling, rendering, and animation applications on the computer.

Effective: Spring 2008

Prerequisite: ART 201 and enrollment in the ART BA ART BFA Art Education Interdisciplinary Digital Studio (IDS) or Integrative Arts degree program

ART 315

New Media Art: New Media Studio (4) A studio course concentrating on digital art and new media authoring practices.

Effective: Spring 2008

Prerequisite: ART 201 and enrollment in the ART BA ART BFA Art Education Interdisciplinary Digital Studio (IDS) or Integrative Arts degree program

ART 316

Video Art and Time-Based Media (4 per semester/maximum of 8) A studio course concentrating on video art, new media, and experimental time based work.

Effective: Spring 2008

Prerequisite: ART 315

ART 317

Metal Art/Technology II (4 per semester/maximum of 8) Further exploration of current and emerging metal art technologies and processes as medium for conceptual, aesthetic, and functional artworks.

Effective: Fall 2006

Prerequisite: ART 217 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 320

Advanced Drawing (4 per semester/maximum of 8) Drawing for art majors; emphasis on sustained individual approaches based on figurative and nonfigurative sources.

Effective: Fall 2006

Prerequisite: ART 220 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program

ART 330

Intermediate Sculpture: Metal Fabrication and Mixed-media (4 per semester/maximum of 8) Development of technical and conceptual skills through metal fabrication, welding, and mixed-media processes.

Effective: Fall 2006

Prerequisite: ART 230 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program

ART 331

Intermediate Sculpture: Metal Casting and Mold-Making (4 per semester/maximum of 8) Development of technical and conceptual skills through metal casting and mold-making processes.

Effective: Fall 2006

Prerequisite: ART 230 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 338

The Body: Issues and Objects (4 per semester/maximum of 8) Creating representations of the human body and related objects as a means of sculptural expression.

Effective: Fall 2006 Ending: Fall 2016

Prerequisite: ART 230 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 340

Printmaking (4 per semester/maximum of 8) Development of technical and expressive skills through selected problems in one or more of the print processes.

Effective: Fall 2006

Prerequisite: ART 240 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 341

Intermediate Printmaking: Intaglio/Relief (4) Instruction and practice in the fundamentals of intaglio and relief printmaking processes in their relation to the fine arts.

Effective: Spring 2008

Prerequisite: ART 240 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 342

Intermediate Printmaking: Lithography/Serigraphy (4) Instruction and practice in the fundamentals of the lithographic and serigraphic processes and their relationship to the meaning of the print.

Effective: Spring 2008

Prerequisite: ART 240 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 343

New Media Printmaking (4 per semester/maximum of 8) A studio course concentrating on the integration of new media and traditional printmaking processes.

Effective: Fall 2006

Prerequisite: ART 201 or ART 240 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program

ART 350

Intermediate Painting (4 per semester/maximum of 8) A variable offering in painting; course conditions defined on a rotating basis according to needs of individuals and groups.

Effective: Fall 2006

Prerequisite: ART 250 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 380

Intermediate Throwing (4 per semester, maximum of 12) Intermediate ceramics course with focus on using wheel and throwing skills leading to personal expression in form, glazing, and firing.

Effective: Fall 2006

Prerequisite: ART 280 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program

ART 381

Intermediate Handbuilding (4 per semester, maximum of 12) An intermediate ceramics course with a focus on handbuilding techniques, leading to personal expression in forming, glazing, and firing.

Effective: Fall 2006

Prerequisite: ART 280 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 390

Introduction to Photochemical Photography (4) Introduction to the fundamentals of black and white photochemical photography.

Effective: Fall 2012

Prerequisite: ART 110S ART 111 ART 290 and successful portfolio review

ART 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ART 399 (IL)

Foreign Study--Art (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ART 409 (ART H 409)

Museum Studies (3) An introduction to the professional activities that occur in art museums.

Effective: Summer 2004

Prerequisite: 6 credits of ART H ART and/or A ED

ART 411 (US)

Seminar in Contemporary Art (3 per semester/maximum of 6) Trends in contemporary art investigated within the framework of studio visitations, museum tours, and through other related avenues of encounter.

Effective: Fall 2006

Prerequisite: ART 122Y ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 413

Performance Art (3) The development, production, and presentation of performance art works, and the study of performance art theory and history.

Effective: Spring 2000

Prerequisite: 4 credits of 300-level art or graduate level status or permission of instructor

ART 415

Integrating Media: Convergence in Practice (4 per semester/maximum of 12) A studio course concentrating on the integration of new media technologies in contemporary art practice.

Effective: Fall 2006

Prerequisite: ART 315

ART 416

Advanced Web and Net Art: Multimedia Publishing (4 per semester/maximum of 12) A studio course concentrating on multimedia online "net art" practice and Web publishing.

Effective: Spring 2008

Prerequisite: ART 203 ART 315 and 8 credits of 300-level new media

ART 417

Metal Art/Technology III (4 per semester/maximum of 12) Advanced exploration of current and emerging metal art technologies and processes as medium for conceptual, aesthetic, and functional artworks.

Effective: Spring 2005

Prerequisite: ART 317

ART 421

Drawing (4 per semester/maximum of 12) Drawing for advanced students, with total emphasis on sustained individual approaches.

Effective: Summer 1992

Prerequisite: ART 320

ART 422

Advanced Figure Drawing (4 per semester/maximum of 8) Concentrated work in recording and understanding the human figure.

Effective: Fall 1998

Prerequisite: ART 220 8 credits of 300-level art courses

ART 430

Advanced Sculpture (4 per semester/maximum of 12) Advanced work in sculpture, with an emphasis on individual development.

Effective: Summer 1992

Prerequisite: ART 330 ART 331 12 credits of 300-level sculpture

ART 431

Installation Art (4) Study and production of original visual statements through installation work as an art form.

Effective: Spring 1998

Prerequisite: 4 credits of 300-level art or graduate level status

ART 438

The Body: Issues and Objects (4 per semester/maximum of 8) Creating representations of the human body and related objects as a means of sculptural expression.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: ART 230 and ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 440

Advanced Printmaking (4 per semester/maximum of 12) Individual projects in one or more of the printmaking processes. Emphasis is on developing a portfolio of prints.

Effective: Fall 1998

Prerequisite: 4 credits of 300-level printmaking courses 8 credits total of 300-level art courses

ART 446

Artists Books (4) Study and production of original visual statements through the book as an art form.

Effective: Spring 2009

Prerequisite: ART 110S ART 111 ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program

ART 447

Photo Based Printmaking (4) Study and production of original visual statements through photographic based printmaking as an art form.

Effective: Spring 2000

Prerequisite: ART 240 4 credits of 300-level Art courses or graduate level status

ART 450

Advanced Painting (4 per semester/maximum of 12) Development of the artist through a series of commitments; each semester serves as a contractual agreement along professional lines.

Effective: Summer 1992

Prerequisite: ART 350

ART 455

Advanced Painting Critique (4 per semester/maximum of 8) The painter in relation to his peers and his profession.

Effective: Fall 1983

Prerequisite: senior or graduate standing

ART 466W

Individual Approaches II (6) An advance studio/lecture addressing the preparation for potential employment and/or entrance into graduate studies.

Effective: Summer 2007

Prerequisite: ART 165 ART 166 ART 265 ART 266 ART 365 ART 366 ART 465

ART 475 (ART H 475) (US)

Contemporary Women Artists (3) An interdisciplinary course that investigates women artists who were integral to the production of contemporary art primarily in the Americas, Europe, and Asia.

Effective: Spring 2009

Prerequisite: fifth-semester standing ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 476 (ART H 476)

History and Theory of Digital Art (3) History and theories of contemporary digital art emphasizing humanistic approaches to technology.

Effective: Spring 2007

Prerequisite: ART H 100 or ART H 112 or ART H 307 or ART H 325 or ART H 326 or ART 211

ART 480

Advanced Ceramic Arts (4 per semester/maximum of 12) Individual exploration of ceramic materials and construction leading to graduate study or career development as a professional potter.

Effective: Summer 1992

Prerequisite: ART 380

ART 490

View Camera Photography (4) Experience with diverse camera formats and applications; particular emphasis on view camera.

Effective: Summer 2002

Prerequisite: ART 390

ART 495

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1995

Prerequisite: prior approval of proposed assignment by instructor

ART 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

ART 496H

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Spring 2012

ART 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

ART 499 (IL)

Foreign Studies--Art (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ART H 001S (GA)

First-Year Seminar (3) An introduction to the field of art history, through an examination of a selected issue in a seminar setting.

Effective: Fall 2000

ART H 100 (GA;IL)

Introduction to Art (3) An approach to the understanding of art through a critical analysis of selected works of architecture, painting, and sculpture. Students who have passed ART H 110 may not schedule this course.

Effective: Spring 2006

ART H 111 (GA;IL)

Ancient to Medieval Art (3) Survey of Ancient Egyptian, Greek, Roman, Byzantine, Early Medieval, Romanesque, and Gothic art, with an emphasis on sculpture and painting.

Effective: Spring 2006

ART H 111U (GA;IL)

Ancient to Medieval Art Honors (3) Honors Survey of Ancient Egyptian, Greek, Roman, Byzantine, Early Medieval, Romanesque, and Gothic art, with an emphasis on sculpture and painting.

Effective: Spring 2016

ART H 112 (GA;IL)

Renaissance to Modern Art (3) Survey of Renaissance, Baroque, Rococo, Romantic, Modern, and Contemporary art, with an emphasis on painting, sculpture, and graphic arts.

Effective: Spring 2006

ART H 112U (GA;IL)

Renaissance to Modern Art Honors (3) Honors Survey of Renaissance, Baroque, Rococo, Romantic, Modern, and Contemporary art, with an emphasis on painting, sculpture, and graphic arts.

Effective: Spring 2016

ART H 120 (GA;IL)

Asian Art and Architecture (3) A selective overview of the art and architecture of India, Southeast Asia, China, Korea, and Japan.

Effective: Summer 2005

ART H 130 (GA;US;IL)

Art of Africa, Oceania, and the Americas (3) A selective overview of the indigenous art of Africa, Oceania and the Americas.

Effective: Spring 2013

ART H 140 (GA;IL)

Introduction to the Art and Architecture of the Mayas, Aztecs, and Incas (3) This course examines the artistic and architectural production of Pre-Columbian Mesoamerica and the Andes.

Effective: Spring 2016

ART H 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ART H 198

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ART H 199 (IL)

Foreign Study--Art History (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ART H 201 (GA;IL)

Ancient to Medieval Architecture (3) A survey of Prehistoric, Ancient Near Eastern Egyptian, Greek, Roman, Early Christian, Byzantine, Early Medieval, Romanesque, and Gothic architecture.

Effective: Spring 2006

ART H 202 (GA;US;IL)

Renaissance to Modern Architecture (3) A survey of Renaissance, Baroque, Rococo, Romantic, Victorian, Modern, Post-Modern, and Contemporary architecture in Europe and America.

Effective: Spring 2006

ART H 226 (GA)

The Comic Book: A History of Sequential Art (3) An overview and examination of the history of sequential art with a focus on comic books and graphic novels.

Effective: Summer 2012

ART H 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

ART H 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

ART H 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ART H 299 (IL)

Foreign Study--Art History (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ART H 301 (GA;IL)

Egyptian and Mesopotamian Art (3) Art of the Ancient Near East, including Egypt, Mesopotamia, and neighboring civilizations.

Effective: Spring 2006

ART H 302 (GA;IL)

Art of the Early Middle Ages (3) A survey of the art of Western Europe from the Early Christian era through the Ottonian Empire, c.300-1050 A.D.

Effective: Spring 2006

ART H 303 (GA;IL)

Italian Renaissance Art (3) The major arts in Italy from the thirteenth century A.D. through the Renaissance; emphasis on sculpture and painting.

Effective: Spring 2006

ART H 304 (GA;IL)

Italian, Spanish, and Spanish Colonial Baroque Art and Architecture (3) A survey of painting, sculpture, and architecture in Italy, Spain, and the Spanish Americas from 1600-1750.

Effective: Fall 2010

ART H 305 (GA;IL)

Romanticism and Revolution (3) A survey of painting and sculpture in Europe 1780-1860, from the origins of Neoclassicism through Romanticism and Realism.

Effective: Fall 2012

ART H 307 (AM ST 307) (GA;US)

American Art (3) History of art in the English colonies and the United States from the seventeenth century to the present.

Effective: Spring 2008

ART H 308 (AM ST 308) (GA;US)

American Architecture (3) History of the architecture of the United States, as well as its Native American and colonial antecedents.

Effective: Summer 2013

ART H 311 (GA;IL)

Greek and Roman Art (3) Greek and Roman art, with emphasis on painting and sculpture.

Effective: Spring 2006

ART H 312 (GA;IL)

Romanesque and Gothic Art (3) Survey of the architecture, sculpture, and painting of the Christian church in western Europe from 1000 to 1500.

Effective: Spring 2006

ART H 313 (GA;IL)

Northern Renaissance Art (3) Art in northern Europe in the fifteenth and sixteenth centuries, emphasizing painters such as Van Eyck, Durer, and Bruegel.

Effective: Spring 2006

ART H 314 (GA;IL)

Art in the Age of Rembrandt (3) Dutch and Flemish painting in the seventeenth century.

Effective: Spring 2006

ART H 315 (ASIA 315) (GA;IL)

Architecture and Art of South and Southeast Asia (3) Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present.

Effective: Summer 2010

ART H 320 (GA;IL)

Chinese Art (3) A general survey of the great periods of Chinese art from the Shang dynasty until the modern period.

Effective: Summer 2005

ART H 325 (GA;IL)

Impressionism to Surrealism (3) A survey of European painting and sculpture from ca. 1850 to ca. 1940.

Effective: Spring 2006

ART H 326 (GA;US;IL)

Art Since 1940 (3) An international survey of painting, sculpture, photography and other media since 1940.

Effective: Summer 2012

ART H 330 (GA;IL)

Islamic Architecture and Art (3) Survey of the art and architecture of Islamic lands from the late seventh century until the eighteenth century.

Effective: Summer 2005

ART H 335 (AFR 335) (GA;IL)

African Art (3) Introduction to the visual arts of Africa, including contemporary African art and the influence of African art outside Africa.

Effective: Fall 2013

ART H 350W

Undergraduate Seminar in the History of Art (3-6) An introduction to original research, methodology, analysis, and writing on a scholarly level.

Effective: Summer 1992

Prerequisite: fifth-semester standing 6 credits in art history at the 300 level or above

ART H 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ART H 398

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ART H 399 (IL)

Foreign Study--Art History (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

Prerequisite: ART H 100 or ART H 110 or ART H 111 or ART H 112

ART H 401 (IL)

Greek Art and Architecture (3-9) Developments in Greek art and architecture, tenth century B.C. to first century B.C.; emphasis on the importance of Greek sanctuaries.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 or ART H 311

ART H 402 (IL)

The Illuminated Manuscript (3) Specific stylistic periods in manuscript painting from A.D. 500-1500 in Western Europe and Byzantium.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 302 or ART H 312

ART H 405 (US;IL)

Pioneers of Modern Architecture (3 per semester/maximum of 6) Selected period or theme in the development of modern architecture during the nineteenth and/or early twentieth centuries.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 202 or ART H 307

ART H 409 (ART 409)

Museum Studies (3) An introduction to the professional activities that occur in art museums.

Effective: Summer 2004

Prerequisite: 6 credits of ART H ART and/or A ED

ART H 410

Taste and Criticism in Art (3) History and literature of art criticism demonstrating the varied philosophic, cultural, iconographic, technical, and visual approaches.

Effective: Summer 1999

Prerequisite: 6 credits of art history

ART H 411 (IL)

Roman Art (3-9) Roman sculpture and painting from Augustus to Constantine.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 or ART H 311

ART H 412 (IL)

The Gothic Cathedral (3) Specific aspects of Romanesque and Gothic church architecture of western Europe, especially France and England, between 1000-1500.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 ART H 302 or ART H 312

ART H 415 (US)

The Skyscraper (3) Origin and evolution of the skyscraper as seen against the background of cultural conditions and technological factors.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 202 or ART H 307

ART H 416 (US)

Studies in American Art (3 per semester/maximum of 6) Selected time periods and/or issues in the art of the United States.

Effective: Fall 2013

Prerequisite: 3 credits of ART H

ART H 420 (IL)

Russian Architecture (3) Russian architecture from the first Orthodox churches of the late tenth century to the end of the Soviet Union.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 112 ART H 201 or ART H 202

ART H 422 (IL)

Studies in Medieval Sculpture (3-9) Specific studies of western European sculpture, 300-1500, with attention to sources, styles, type, and iconography.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 ART H 302 or ART H 312

ART H 423 (IL)

Studies in Italian Renaissance Art (3-9) Specific studies of Italian Renaissance art, including the work of artists such as Leonardo da Vinci, Michaelangelo, and Raphael.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 202 or ART H 303

ART H 424 (IL)

Masters of Northern Baroque Art (3) Seventeenth-century painters in Flanders and Holland, including the works of artists such as Rubens, Rembrandt, and Vermeer.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 or ART H 314

ART H 426 (US;IL)

Iconoclasm: Powerful Images and their Destruction (3) Iconoclasm: exploring the political, religious, and social motivations behind the destruction of powerful imagery throughout history.

Effective: Summer 2009

Prerequisite: 3 credits of Art History in any area

ART H 435 (IL)

Studies in Modern Art (3-6) Lectures focusing on a selected movement of nineteenth- or twentieth-century art.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 305 ART H 307 or ART H 325

ART H 440 (ASIA 440) (IL)

Monuments of Asia (3-9 per semester/maximum of 9) An exploration of major Asian sites and monuments through a focus on their historical and cultural significance.

Effective: Summer 2012

Prerequisite: ART H 100 or ART H 120 or ART H 315 or ART H 320 or ART H 330

ART H 442 (IL)

Late Antique and Early Christian Art (3) Survey of the architecture, painting, and minor arts of Christian society from the beginning to the mid-sixth century.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 or ART H 302

ART H 445 (IL)

Oceanic Art (3) Survey of the arts of Oceania (Polynesia, Micronesia, Melanesia), including masks, sculpture, textiles, architecture and other art forms.

Effective: Summer 2012

Prerequisite: 3 credits of Art History

ART H 446 (AFR 446) (IL)

Topics in African Art (3 per semester/maximum of 9) Topics vary from "Arts of Eastern and Southern Africa" to "Arts of West Africa."

Effective: Spring 2014

Prerequisite: 3 credits of Art History

ART H 447 (AFR 447) (IL)

Topics in the Art of the African Diaspora (3 per semester/maximum of 6) Selected topics in arts of the African Diaspora (South America, Caribbean, USA) including masquerades, textiles, architecture and other art forms.

Effective: Spring 2014

Prerequisite: 3 credits of Art History

ART H 450 (US;IL)

The History of Photography (3) The history of photography from 1839, with particular emphasis on the relationship with the plastic arts.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 305 ART H 307 or ART H 325

ART H 452 (IL)

Byzantine Art (3) Monumental and minor arts of Byzantium and related areas from the reign of Justinian to the Turkish conquest of Constantinople.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 or ART H 302

ART H 456 (IL)

Renaissance and Baroque Palaces (3) This course examines palace architecture and decoration in Italy, France, England, and Germany from 1450-1700.

Effective: Spring 2011

Prerequisite: ART H 100 or ART H 112 or ART H 202 or ART H 303 or ART H 304

ART H 458 (IL)

Baroque Capitals of Europe (3) This course examines the architecture and urbanism of European capital cities from 1600-1800.

Effective: Spring 2010

Prerequisite: ART H 100 or ART H 112 or ART H 202 or ART H 304 or ART H 314

ART H 460 (IL)

Art and Empire: Aztec, Inca and Spanish (3) This course is a comparative study of the artistic production used in Aztec, Inca and Spanish empires.

Effective: Summer 2012

Prerequisite: 3 credits of ART H

ART H 462 (IL)

Studies in Latin American Art (3 per semester/maximum of 6) Specific studies of the visual and material culture created in Latin America from the colonial through the modern era.

Effective: Summer 2012

Prerequisite: 3 credits of Art History

ART H 464 (IL)

French Baroque Painting (3) Examination of seventeenth-century French painting, including Italian influences; the provincial, Classical, and official styles in France.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 or ART H 304

ART H 470

Contemporary Art (3 per semester/maximum of 9) A focused investigation of a special topic relating to art made after 1940.

Effective: Fall 2013

Prerequisite: 3 credits of ART H

ART H 475 (ART 475) (US)

Contemporary Women Artists (3) An interdisciplinary course that investigates women artists who are integral to the production of contemporary art primarily in the Americas, Europe, and Asia.

Effective: Spring 2009

Prerequisite: Fifth semester standing ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program

ART H 476 (ART 476)

History and Theory of Digital Art (3) History and theories of contemporary digital art emphasizing humanistic approaches to technology.

Effective: Spring 2007

Prerequisite: ART H 100 or ART H 112 or ART H 307 or ART H 325 or ART H 326 or ART 211

ART H 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

ART H 496H

Independent Studies - Honors (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Spring 2012

ART H 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

ART H 498

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ART H 499 (IL)

Foreign Study--Art History (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ASIA 315 (ART H 315) (GA;IL)

Architecture and Art of South and Southeast Asia (3) Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present.

Effective: Summer 2010

ASIA 440 (ART H 440) (IL)

Monuments of Asia (3-9 per semester/maximum of 9) An exploration of major Asian sites and monuments through a focus on their historical and cultural significance.

Effective: Summer 2012

Prerequisite: ART H 100 or ART H 120 or ART H 315 or ART H 320 or ART H 330

BRASS 100J (GA)

Trumpet: Secondary (1 per semester, maximum of 8) Individual instruction in trumpet one-half hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 101J (GA)

French Horn: Secondary (1 per semester, maximum of 8) Individual instruction in French horn one-half hour per week.

For students who qualify.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 102J (GA)

Trombone: Secondary (1 per semester, maximum of 8) Individual instruction in trombone one-half hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 103J (GA)

Euphonium: Secondary (1 per semester, maximum of 8) Individual instruction in euphonium/baritone one-half hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 104J (GA)

Tuba: Secondary (1 per semester, maximum of 8) Individual instruction in tuba one-half hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 110J (GA)

Trumpet: Secondary (2 per semester, maximum of 16) Individual instruction in trumpet one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 111J (GA)

French Horn: Secondary (2 per semester, maximum of 16) Individual instruction in French horn one hour per week. For students who qualify.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 112J (GA)

Trombone: Secondary (2 per semester, maximum of 16) Individual instruction in trombone one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 113J (GA)

Euphonium: Secondary (2 per semester, maximum of 16) Individual instruction in euphonium/baritone one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 114J (GA)

Tuba: Secondary (2 per semester, maximum of 16) Individual instruction in tuba one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

COMM 150 (GA)

The Art of the Cinema (3) The development of cinema to its present state; principles of evaluation and appreciation; examples from the past and present.

Effective: Spring 2007

COMM 150H (GA)

The Art of the Cinema (3) The development of cinema to its present state; principles of evaluation and appreciation; examples from the past and present.

Effective: Spring 2007

COMM 250 (GA)

Film History and Theory (3) Exploration of film theory and criticism in the context of aesthetic, technological, and economic evolution of film history.

Effective: Spring 2004

Prerequisite: COMM 150

COMM 431

Topics in Television Culture and Communication (3) Study television technologies, techniques, audiences, genres and trends in relation to a specific decades or cultural periods.

Effective: Spring 2015

Prerequisite: COMM 100 COMM 180 or permission of program

DANCE 100 (GA;US;IL)

Dance Appreciation (3) Explore dance as a vital, communicative and performing art, reflecting social values and cultural beliefs.

Effective: Fall 2007

DANCE 230 (GA)

Ballet (1.5 per semester/maximum of 6) An exploration of Ballet technique.
Effective: Summer 2012

DANCE 240 (GA)

Jazz Dance (1.5 per semester/maximum of 6) An exploration of jazz dance technique throughout history.
Effective: Summer 2012

DANCE 250 (GA)

Tap Dance (1.5 per semester/maximum of 6) An exploration of tap dance technique throughout history.
Effective: Summer 2012

DANCE 261 (GA)

Beginning Modern Dance I (1.5 per semester/maximum of 6) Introduction to modern dance as an art form; development of dance technique and composition; teaching methods for improvisational skills.
Effective: Spring 2013

DANCE 361 (GA)

Intermediate Modern Dance I (1.5 per semester/maximum of 6) Development of techniques and principles of modern dance on the intermediate level.
Effective: Spring 2013
Prerequisite: DANCE 262

DANCE 362 (GA)

Intermediate Modern Dance II (1.5 per semester/maximum of 6) A continuation of Modern Dance I to augment technical proficiency.
Effective: Spring 2013
Prerequisite: DANCE 361

ENGL 050 (GA)

Introduction to Creative Writing (3) Practice and criticism in the reading, analysis and composition of fiction, nonfiction and poetry writing.
Effective: Spring 2001

ENGL 050H (GA)

Introduction to Creative Writing (3) Practice and criticism in the reading, analysis and composition of fiction, nonfiction and poetry writing.
Effective: Summer 2012

GD 201

Typography (3) A consideration of the word in relation to visual organization and its application to communication.
Effective: Fall 2006
Prerequisite: GD 200

GD 300

Design Photography (4) An investigation of graphic photography processes and how print technology affects the final appearance of a photograph.
Effective: Fall 2006
Prerequisite: GD 201 and successful portfolio review

GD 301

Experience Design Process + Methods (4) Experience design process and methods for graphic design majors.
Effective: Fall 2016
Prerequisite: GD 201

GD 302

Applied Communication (4) Definition and concentrated involvement in problem/audience analysis, with emphasis on understanding symbol and image in evoking audience response.
Effective: Fall 2006
Prerequisite: GD 300 GD 301

GD 304

Practical Communications (3) Practical design experience for students through design/publicity problems from the University and community non-profit organizations.
Effective: Fall 2006
Prerequisite: Prerequisite or concurrent GD 300 GD 301

GD 310

Studio Apprenticeship (3 per semester/maximum of 6) Direct involvement in the creative process of the artist-teacher in the studio environment.
Effective: Fall 2006
Prerequisite: Junior or senior standing in Graphic Design. Prior approval of proposed assignment by instructor.

GD 400

Time and Sequence (4) Development of visual sequence as replies to graphic design problems.
Effective: Fall 2006
Prerequisite: GD 302

GD 401

Package Design (3) Orientation to packaging designs as it relates to the consumer, client, and to societal and environmental concerns.
Effective: Fall 2006

Prerequisite: GD 302

GD 402

Senior Problems (4) Development of visual replies to graphic design problems.

Effective: Fall 2006

Prerequisite: GD 400 GD 401

GD 403W

Graphic Design Seminar (3) A seminar on subjects which relate to the field of graphic design.

Effective: Fall 2007

Prerequisite: GD 302

GD 404

Book Design (3) Writing, designing, illustrating and production (printing) of a book.

Effective: Fall 2006

Prerequisite: GD 302

GLIS 400Y (IL)

Seminar in Global and International Studies (3) An upper-division capstone seminar focusing critical themes in Global and International Studies with a focus on the writing of a senior thesis for the Global Studies Major.

Effective: Spring 2016

Prerequisite: GLIS 101 GLIS 102

HIST 470

Modern Bondage: Slavery in the Americas, 1492-1888 (3) The work, culture, ideology, and political economy of slavery in the Americas between 1500 and 1888.

Effective: Summer 2007

Prerequisite: HIST 011 HIST 020 HIST 152 HIST 178 or HIST 192

INART 001 (GA)

The Arts (3) Develop critical perception, knowledge, and judgments through an examination of the basic concepts common among the arts.

Effective: Spring 2006

INART 003 (GA)

Reception of the Arts (3) This course considers how art uses time, space, and causality to define culture and the human condition.

Effective: Spring 2004

INART 005 (GA)

Performing Arts (3) Introduction to music, dance, and theatre. Orientation to the aesthetics, theory, and practice of professional performance.

Effective: Summer 2012

INART 010 (GA)

The Popular Arts in America: Mass Media Arts (3) An introduction to the arts of the mass media with emphasis on how film, radio, television, and the print media influence and reflect society.

Effective: Summer 2012

INART 015 (GA)

The Popular Arts in America: Performing Arts (3) The development of the performing arts of American popular culture; emphasis on popular music, dance, theatre, and variety arts.

Effective: Spring 2004

INART 055 (GA)

History of Electroacoustic Music (3) A history of electroacoustic music as a consequence of developments in culture and technology from 1880 to present.

Effective: Summer 2012

INART 062 (GA;US;IL)

West African and African American Arts: from the 1960s to the present (3) An introduction to West African and African American Arts from the 1960s to the present.

Effective: Summer 2014

INART 100 (GA)

Seminar in Integrative Arts (3) A study of various arts with emphasis on comparison, contrast, and other aspects of interrelation. Topics will change each semester.

Effective: Spring 2004

INART 100W (GA)

Seminar in Integrative Arts (3) A study of various arts with emphasis on comparison, contrast, and other aspects of interrelation. Topics will change each semester.

Effective: Summer 2012

INART 110 (GA)

The Dramatic Arts in the Mass Media (3) The place of television-radio-film drama in our culture; relationship with other art forms; standards of evaluation.

Effective: Summer 2012

INART 115 (GA;US)

The Popular Arts in America: Popular Music (3) An examination of the roots, development, and significance of popular

music in our culture.

Effective: Summer 2013

INART 116 (GA;US)

The Popular Arts in America: The History of Rock and Roll-The 1950s (3) This course examines the roots, development, and significance of rock and roll music in its first decade.

Effective: Summer 2012

INART 125 (GA;US;IL)

The Popular Arts in America: The History of Rock and Roll - Punk Rock (3) An examination of the roots, development, and significance of punk rock in our culture.

Effective: Summer 2012

INART 126 (AF AM 126) (GA;US)

The Popular Arts in America: The History of Rock and Roll - Hip-Hop (3) An examination of the roots, development, and significance of hip-hop in our culture.

Effective: Spring 2014

INART 200 (GA)

The Popular Arts in America: Elvis Presley - The King of Rock and Roll (3) The significance and influence of Elvis Presley as an artist and cultural force focusing on his recordings and major performances.

Effective: Summer 2013

INART 258B (GA)

Fundamentals of Digital Audio (1) A general overview of music technologies current to music educators and performers.

Effective: Spring 2012

INART 410

Early Pennsylvania Decorative Arts and Furniture (3) The study of Pennsylvania and related furniture, pottery, paintings, and decorative arts of the seventeenth, eighteenth, and early nineteenth centuries.

Effective: Summer 2012

INART 415

Nineteenth Century Pennsylvania Architecture and Restoration (3) Interior and exterior design of early Pennsylvania architecture; understanding and evaluation of and experience in restoration.

Effective: Summer 2012

Prerequisite: INART 410

KEYBD 100J (GA)

Piano: Secondary (1 per semester, maximum of 8) Individual instruction in piano one-half hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

KEYBD 101J (GA)

Organ: Secondary (1 per semester, maximum of 8) Individual instruction in pipe organ one-half hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

KEYBD 110J (GA)

Piano: Secondary (2 per semester, maximum of 16) Individual instruction in piano one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

KEYBD 111J (GA)

Organ: Secondary (2 per semester, maximum of 16) Individual instruction in pipe organ one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

LARCH 060 (GA;US;IL)

History of Design on the Land (3) A survey of the historical development of outdoor space in relationship to allied arts from early beginnings to this century. Students may take only one course for General Education credit from LARCH 003 GA or 060 GA.

Effective: Fall 2010

LARCH 065 (GA;US;IL)

Built Environment and Culture (3) Investigates the relationship between socio-cultural practices and the development and organization of contemporary built environments.

Effective: Summer 2005

MUSIC 005 (GA)

An Introduction to Western Music (3) A general survey of art music in western society, highlighting important composers and stylistic developments.

Effective: Spring 2004

MUSIC 005S (GA)

An Introduction to Western Music (3) A general survey of art music in western society, highlighting important composers and stylistic developments.

Effective: Summer 2006

MUSIC 007 (GA;US)

Evolution of Jazz (3) Study of the origins and development of jazz as an art form.

Effective: Summer 2005

MUSIC 008 (GA)

Rudiments of Music (3) Introduction to the elements of music: notation, scales, meter, rhythm, intervals; basic chord structure.

Effective: Fall 2004

MUSIC 009 (GA;IL)

Introduction to World Musics (3) An overview of the music of India, China, Japan, Indonesia, Africa, and the Middle East.

Effective: Summer 2005

MUSIC 011 (GA)

Under the Hood: How Classical Music Works (3) An introductory examination of classical music, drawing together aspects of theory and repertoire to understand how the music works.

Effective: Summer 2013

MUSIC 040S

First-Year Seminar in Music Education (1) Introduction to the University, the School of Music, the music education degree program, and the music teaching profession.

Effective: Fall 2006

MUSIC 050 (GA)

Beginning Piano: Non-Music Major (1) Introduction to the keyboard, notation, chord progressions, transposition, improvisation, and simple accompanying techniques for the non-music major. An additional fee is required for this course.

Effective: Fall 2004

MUSIC 051 (GA)

Intermediate Class Piano: Non-Music Major (1) Instruction in harmonizing melodies, accompanying techniques, improvisation, and repertoire.

Effective: Fall 2004

Prerequisite: MUSIC 050 or placement audition

MUSIC 052 (GA)

Voice Class: Non-Music Major (1) Group study emphasizing development of rudimentary skills and their recreational use in a range of popular and art music.

Effective: Fall 2004

MUSIC 053 (GA)

Class Voice Practicum (1) Voice study in group and individual formats, supervised by in-class lessons and discussions, enhanced by additional individual instruction with pedagogy students.

Effective: Fall 2004

Prerequisite: audition

MUSIC 054 (GA)

Beginning Class Guitar: Non-Music Major (1) Class instruction in guitar for non-music majors.

Effective: Fall 2004

MUSIC 076

Chamber Orchestra (1 per semester, maximum of 8) Chamber orchestra rehearsal and performance.

Effective: Spring 2001

Prerequisite: audition

MUSIC 077 (GA)

Philharmonic Orchestra (1 per semester/maximum of 8) Orchestra rehearsal and performance.

Effective: Fall 2004

Prerequisite: audition

MUSIC 078 (GA)

Symphonic Wind Ensemble (1 per semester/maximum of 8) Rehearsal and performance of wind repertoire and concert band literature.

Effective: Fall 2004

Prerequisite: audition

MUSIC 079

Pep Band (1 per semester/maximum of 4) A band to perform at selected athletic events.

Effective: Spring 2001

Prerequisite: audition

MUSIC 080 (GA)

Symphonic Band (1 per semester/maximum of 8) Rehearsal and performance of symphonic band literature. A select group using standard instrumentation.

Effective: Fall 2004

Prerequisite: audition

MUSIC 081 (GA)

Marching Blue Band (1 per semester/maximum of 4) Rehearsal and performance of appropriate music and maneuvers for football games and related events.

Effective: Fall 2004

Prerequisite: audition

MUSIC 082 (GA)

Concert Band (1 per semester/maximum of 8) Rehearsal and performance of concert band literature.

Effective: Fall 2004

Prerequisite: audition

MUSIC 083 (GA)

Campus Band (1 per semester/maximum of 8) Rehearsal and performance of concert band literature.

Effective: Spring 2002

Prerequisite: audition

MUSIC 084 (GA)

Jazz Ensemble (1 per semester/maximum of 8) Survey and performance of historic and contemporary big band styles.

Effective: Fall 2004

Prerequisite: audition

MUSIC 086 (GA)

Percussion Ensemble (1 per semester/maximum of 8) Study and performance of percussion chamber music in various instrumental combinations, focusing on the classical and contemporary repertoire.

Effective: Spring 2004

Prerequisite: audition

MUSIC 087

Mallet Ensemble (1) Study and performance of music for keyboard percussion instruments.

Effective: Spring 2001

Prerequisite: audition

MUSIC 088 (GA)

Campus Choir (1 per semester/maximum of 8) Building skills needed for successful choral singing including vocal production, sight singing, ear training, and music fundamentals.

Effective: Fall 2001

MUSIC 089 (GA)

University Choir (1 per semester/maximum of 8) Rehearsal and performance of choral repertoire appropriate to mixed-voice ensemble of 100-150 voices.

Effective: Spring 2004

Prerequisite: audition

MUSIC 090 (GA)

Glee Club (1 per semester/maximum of 8) Rehearsal and performance of music composed for male voices from the sixteenth to the twentieth centuries, including sacred and secular compositions.

Effective: Spring 2004

Prerequisite: audition

MUSIC 091 (GA)

Oriana Singers (1 per semester/maximum of 8) Rehearsal and performance of choral repertoire for treble voices from the sixteenth to twentieth centuries, including sacred and secular compositions.

Effective: Spring 2004

Prerequisite: audition

MUSIC 092 (GA)

Chamber Music for Voices (1 per semester/maximum of 8) Select groups of singers performing choral chamber music.

Effective: Spring 2004

Prerequisite: audition

MUSIC 093 (GA;US;IL)

Essence of Joy (1 per semester, maximum of 8) Rehearsal and performance of choral repertoire from the African/American tradition.

Effective: Spring 2006

Prerequisite: audition

MUSIC 094 (GA)

Women's Chorale (1 per semester, maximum of 8) Rehearsal and performance of treble choral literature.

Effective: Spring 2004

Prerequisite: audition

MUSIC 100 (GA)

Campus Orchestra (1 per semester/maximum of 10) Rehearsal and performance orchestral literature.

Effective: Fall 2012

Prerequisite: audition

MUSIC 101

Music Common Hour (1) Student and faculty recitals, master classes, lectures by faculty and guests, and Common Hour attendance.

Effective: Fall 1985

MUSIC 103 (GA)

Concert Choir (1 per semester/maximum of 8) Rehearsal and performance of choral repertoire appropriate to mixed-voice ensemble of approximately sixty voices.

Effective: Spring 2004

Prerequisite: audition

MUSIC 104 (GA)

Chamber Singers (1 per semester/maximum of 8) Rehearsal and performance of choral repertoire appropriate to mixed-voice ensemble of approximately twenty-four voices.

Effective: Spring 2004

Prerequisite: audition

MUSIC 106 (GA)

Early Music Ensemble (1 per semester/maximum of 8) Ensemble for the performance and study of Baroque or early music on instruments of the era.

Effective: Spring 2004

Prerequisite: audition

MUSIC 109 (GA)

The Music of the Beatles (3) This course will consider the music of the Beatles by examining how John Lennon, Paul McCartney, and George Harrison developed as songwriters.

Effective: Spring 2013

MUSIC 110

Keyboard Skills I: Music Major (1) Introduction to the keyboard, chord progressions, transposition, improvisation, and simple accompanying techniques.

Effective: Fall 1985

MUSIC 112

Guitar Techniques I (0.5) Performance and teaching techniques for guitar.

Effective: Spring 2008

MUSIC 113

Music Theatre--Class Voice I (1) Group study emphasizing development of sound vocal and musicianship skills fundamental for music theatre.

Effective: Spring 2001

Prerequisite: admission into the School of Theatre with intent to major in Music Theatre

MUSIC 114

Music Theatre--Class Voice II (1) Group study emphasizing development of sound vocal and musicianship skills fundamental for music theatre.

Effective: Spring 2001

Prerequisite: MUSIC 113

MUSIC 115

Beginning Voice Class (1) Class voice emphasizing the fundamentals of healthy singing technique. For Music Majors only.

Effective: Fall 2011

MUSIC 116

Intermediate Voice Class (1 per semester/maximum of 4) Class voice, emphasizing pedagogical experiences and techniques for public school music classrooms. For Music Majors only.

Effective: Fall 2011

MUSIC 119S

First-Year Music Seminar (2) Individual applied instruction and group activities; orientation, area recitals, and studio classes as required by instructor.

Effective: Summer 1999

Prerequisite: permission of instructor

MUSIC 121

Basic Musicianship I (1) Elementary sight singing and dictation.

Effective: Fall 1989

Prerequisite: ability to reproduce simple rhythm and tonal patterns

MUSIC 122

Basic Musicianship II (1) Continuation of Music 121.

Effective: Fall 1989

Prerequisite: MUSIC 121

MUSIC 129S

First-Year Performance Seminar (3) Individual applied instruction and group activities; orientation, area recitals, and studio classes as required by instructor.

Effective: Summer 1999

Prerequisite: permission of instructor

MUSIC 131

Music Theory I (2) Review of rudiments; introduction to the fundamental linear and vertical features of tonal music, integration of written and aural skills.

Effective: Fall 1989

Prerequisite: ability to read musical notation; knowledge of musical rudiments.

MUSIC 132

Music Theory II (2) Continuation of Music 131.

Effective: Fall 1989

Prerequisite: MUSIC 131

MUSIC 151

Brass Techniques I (1) Introduction to basic performance techniques on brass instruments; teaching strategies and materials for use in a heterogeneous instrument setting.
Effective: Fall 2007

MUSIC 152

Percussion Techniques I (1) Introduction to basic performance techniques on percussion instruments; teaching strategies and materials for use in a heterogeneous instrument setting.
Effective: Fall 2007

MUSIC 153

String Techniques I (1) Performance techniques on stringed instruments for music education majors.
Effective: Fall 2007

MUSIC 154

Woodwind Techniques I (1) Performance and teaching techniques for woodwind instruments.
Effective: Fall 2007

MUSIC 162 (IL)

Introduction to Music History (2) An introduction to Western music history and world music of selected cultures through the study of representative works.
Effective: Spring 2006

MUSIC 170

Keyboard Skills II: Music Major (1) Instruction in secondary chord progressions, transposition, improvisation, accompanying techniques, simple score reading.
Effective: Fall 1985
Prerequisite: MUSIC 050 MUSIC 110 or placement audition

MUSIC 173S

First-Year Composition Seminar (2) Individual composition instruction for freshman composition majors (Fall semester) and group activities.
Effective: Summer 1999
Prerequisite: admission to the BM degree in Composition

MUSIC 174J

Composition II (2) Composition instruction for first-year composition majors.
Effective: Fall 2012

MUSIC 181

Jazz Improvisation I (2) A study of the fundamentals of jazz theory, harmonic functions, and their applications to jazz improvisation.
Effective: Fall 1991
Prerequisite: MUSIC 132

MUSIC 182

Jazz Improvisation II (2) A study of advanced harmonic concepts and their application to jazz improvisation.
Effective: Summer 1986
Prerequisite: MUSIC 181

MUSIC 190 (GA)

Chamber Music for Strings (1 per semester/maximum of 8) Preparation for performance of advanced chamber music literature involving primarily string instruments--string quartets, piano trios, clarinet quintets.
Effective: Spring 2004
Prerequisite: permission of instructor

MUSIC 191 (GA)

Chamber Music for Woodwinds (1 per semester/maximum of 8) Preparation for performance of advanced chamber music literature involving primarily woodwind instruments--woodwind quintets and quartets.
Effective: Spring 2004
Prerequisite: permission of instructor

MUSIC 192 (GA)

Chamber Music for Brass (1 per semester/maximum of 8) Preparation for performance of advanced chamber music literature involving primarily brass instruments--brass quartets and quintets.
Effective: Spring 2004
Prerequisite: permission of instructor

MUSIC 193

Sonata Duos (1 per semester/maximum of 8) Preparation for performance of advanced sonata literature for various individual instruments with keyboard.
Effective: Fall 1983
Prerequisite: permission of instructor

MUSIC 194

Studio and Recital Accompanying (1 per semester/maximum of 8) Keyboard accompaniment of student soloists in the studio and in public performance under faculty supervision.
Effective: Fall 1983
Prerequisite: KEYBD 120J or KEYBD 130J or consent of supervising faculty member

MUSIC 210

Keyboard Skills III: Music Major (1) Playing accompaniments from chord symbols and full notation, transposition,

improvisation, modulation, score-reading, and standard literature.

Effective: Fall 1985

Prerequisite: MUSIC 170 or placement audition

MUSIC 221

Basic Musicianship III (1) Intermediate sight singing and dictation.

Effective: Fall 1991

Prerequisite: MUSIC 122 Prerequisite or concurrent: MUSIC 231

MUSIC 222

Basic Musicianship IV (1) Continuation of Music 221.

Effective: Spring 1997

Prerequisite: MUSIC 221 . Prerequisite or concurrent:

MUSIC 231

Music Theory III (2) Intermediate concepts of tonal theory.

Effective: Fall 1989

Prerequisite: MUSIC 132

MUSIC 241

Music for Classroom Teachers (3) Development of competencies for guiding musical experiences of children in the elementary classroom.

Effective: Spring 2001

Prerequisite: for students in the K-6 Teacher Certification Program only

MUSIC 261 (GA;IL)

Survey of Music History I (3) A survey of music history to 1750, with readings, listening, and lecture.

Effective: Spring 2012

Prerequisite: MUSIC 131 MUSIC 162

MUSIC 262 (GA;IL)

Survey of Music History II (3) A survey of music history from 1750 to the present, with readings, listening, and lecture.

Effective: Spring 2012

Prerequisite: MUSIC 132 MUSIC 162

MUSIC 266

Basic Conducting (1) Basic instruction and practicum in conducting, both choral and instrumental.

Effective: Fall 1993

Prerequisite: MUSIC 221 MUSIC 231

MUSIC 267

Techniques of Composition (2) Basic instruction in the techniques of composition in all idioms.

Effective: Fall 1993

Prerequisite: or concurrent: MUSIC 231

MUSIC 270

Keyboard Skills IV: Music Major (1) Instruction in secondary chord progressions, transposition, improvisation, accompanying techniques, score reading.

Effective: Summer 1987

Prerequisite: MUSIC 210 or placement audition

MUSIC 273J

Composition III (2) Composition instruction for second-year composition majors.

Effective: Fall 2012

Prerequisite: MUSIC 174J

MUSIC 274J

Composition IV (2) Composition instruction for second-year composition majors.

Effective: Fall 2012

Prerequisite: MUSIC 273J

MUSIC 295A

Early Field Experience in Music Education (1) Observation of music learning and teaching processes, development of basic teaching skills and reflective behaviors.

Effective: Spring 2008

Prerequisite: fourth semester standing MUSIC 115 MUSIC 210

MUSIC 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

MUSIC 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

MUSIC 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

MUSIC 331

Tonal Analysis (2) Introduction to standard procedures of tonal analysis, including concepts of form and structure.

Effective: Spring 1997

Prerequisite: MUSIC 221 MUSIC 231

MUSIC 332

Analysis of Twentieth Century Music (2) Application of analytical techniques and compositional theories to music of the twentieth century.

Effective: Summer 1996

Prerequisite: MUSIC 331

MUSIC 336

Orchestration (2) Scoring for the orchestra.

Effective: Spring 1988

Prerequisite: MUSIC 222 MUSIC 232

MUSIC 366

Intermediate Conducting (1) Intermediate instruction in conducting; conducting techniques specific to instrumental or choral music; introduction to rehearsal technique.

Effective: Fall 2008

Prerequisite: MUSIC 266 MUSIC 270 MUSIC 331

MUSIC 373J

Composition V (3) Composition instruction for third-year position majors.

Effective: Fall 2012

Prerequisite: MUSIC 274J

MUSIC 374J

Composition VI (3) Composition instruction for third-year composition majors.

Effective: Fall 2012

Prerequisite: MUSIC 373J

MUSIC 387

Language Diction for Singers: Italian and English (1) Intensive drill in the pronunciation, phonetic transcription, and singing of Italian and English.

Effective: Summer 1991

Prerequisite: VOICE 170J or VOICE 180J or 2 semesters of VOICE 100J or VOICE 110J

MUSIC 388

Language Diction for Singers: French (1) Intensive drill in the pronunciation, phonetic transcription, and singing of French.

Effective: Spring 1987

Prerequisite: VOICE 170J or VOICE 180J or two semesters of VOICE 100J or VOICE 110J

MUSIC 389

Language Diction for Singers: German (1) Intensive drill in the pronunciation, phonetic transcription, and singing of German.

Effective: Spring 1987

Prerequisite: VOICE 170J or VOICE 180J or two semesters of VOICE 100J or VOICE 110J

MUSIC 395A

Cohort Practicum I (1) Observation and pre-service experience in the schools. Limited to Music Education Majors.

Effective: Fall 2008

Prerequisite: Acceptance into Teacher Education Degree Program in Music

MUSIC 395B

Cohort Practicum II (1) Observation and teaching experiences in a variety of musical instruction settings.

Effective: Spring 2009

Prerequisite: MUSIC 341 MUSIC 395A piano proficiency passed

MUSIC 395C

Practicum in Music Teaching (1 per semester/maximum of 5) Field experiences in music teaching for undergraduate music education majors.

Effective: Spring 2013

Prerequisite: acceptance into the School of Music

MUSIC 400J

Solo Recital (1) Required recital for Performer's Certificate.

Effective: Fall 2012

Prerequisite: permission of the director of the school of music

MUSIC 412

Jazz Pedagogy (2) The development of advanced skills in pedagogy for teaching jazz bands.

Effective: Summer 1994

Prerequisite: admission to the Music Education program or certification

MUSIC 414

String Pedagogy (1-2) The development of skills in pedagogy for teaching strings.

Effective: Spring 1992

Prerequisite: completion of 300-level strings course

MUSIC 415

Woodwind Pedagogy (1-2) The development of skills in pedagogy for teaching woodwinds.

Effective: Spring 1992

Prerequisite: completion of 300-level woodwind course

MUSIC 416

Brass Pedagogy (1-2) The development of skills in pedagogy for teaching brass.

Effective: Spring 1992

Prerequisite: completion of 300-level brass course

MUSIC 417

Percussion Pedagogy (1-2) The development of advanced skills in pedagogy for teaching percussion.

Effective: Summer 1992

Prerequisite: MUSIC 152 ; PERCN 320J or PERCN 330J or permission of instructor

MUSIC 418

Voice Pedagogy (2) Analysis of techniques of teaching voice and studies of related music literature and pedagogical writings.

Effective: Spring 2004

Prerequisite: VOICE 270J or VOICE 280J ; or four semesters of VOICE 100J or VOICE 110J

MUSIC 419

Piano Pedagogy I (2) Analysis of beginning teaching methods and teaching strategies for children.

Effective: Spring 1997

Prerequisite: KEYBD 270 or KEYBD 280 ; MUSIC 331

MUSIC 421

Jazz Combo Class (1 per semester/maximum of 8) Study and performance of small group jazz.

Effective: Fall 2013

Prerequisite: MUSIC 181

MUSIC 422

Jazz Harmony and Arranging (3) Analysis and composition of jazz tunes and chord progressions; instrumental and vocal arranging in the jazz idiom.

Effective: Fall 1983

Prerequisite: MUSIC 222 MUSIC 232

MUSIC 424

Piano Pedagogy II (2) Analysis of techniques of teaching intermediate-early advanced level piano and studies of music literature and pedagogical writings.

Effective: Spring 1997

Prerequisite: KEYBD 270 or KEYBD 280 ; MUSIC 331

MUSIC 425

Advanced Voice Pedagogy (2) Analysis of techniques of teaching voice, supervised teaching, studies of studio materials and related topics.

Effective: Spring 2004

Prerequisite: MUSIC 418

MUSIC 429

Aural Review for Graduate Students (1) An intensive review of the aural skills required for a theoretical understanding of 18th- and 19th-century music.

Effective: Summer 1994

Prerequisite: MUSIC 221 or undergraduate core in music theory at an accredited university

MUSIC 431

ADVANCED TONAL ANALYSIS (2-3) Advanced techniques of musical analysis.

Effective: Fall 1996

Prerequisite: MUSIC 331

MUSIC 432

Graduate Review of Twentieth-Century Analysis (2-3) The theory and analysis of style in music of the twentieth century.

Effective: Fall 1997

Prerequisite: MUSIC 262 MUSIC 331

MUSIC 433

Advanced Analysis of Twentieth Century Music (2-3) In-depth studies of selected twentieth-century repertoires and/or analytical models.

Effective: Summer 1996

Prerequisite: MUSIC 262 MUSIC 332

MUSIC 435

Score Reading (1) Introduction in score reading at the keyboard.

Effective: Spring 1991

Prerequisite: MUSIC 232 ; piano proficiency passed

MUSIC 442W

Emphasis in Secondary General Music (3) Emphasis in teaching in secondary general music settings.

Effective: Fall 2013

Prerequisite: Limited to Music Education Majors. MUSIC 345 MUSIC 395B

MUSIC 450

Teaching Marching Band (2) Traditional and contemporary drill design principles, show development strategies, instructional techniques, and organizational procedures involved in teaching marching band.

Effective: Fall 2007

Prerequisite: MUSIC 345 or three years collegiate marching band experience or permission of program

MUSIC 452

Computer Music Synthesis (3) Use of sound synthesis software for music creation.

Effective: Spring 2013

Prerequisite: INART 258A and INART 050

MUSIC 455

Technology in Music (1-3:1.5:1.5) Survey of how musical information is stored and processed in computer systems.

Effective: Spring 2008

Prerequisite: CMPSC 100 CMPSC 101 CMPSC 121 or MUSIC 231

MUSIC 458

Electronic Music Composition (3) An introduction to the art of composition in the electronic audio medium.

Effective: Spring 2011

Prerequisite: INART 258A

MUSIC 461W

Studies in Music History: Antiquity to 1600 (3 per semester/maximum of 6) In-depth study of selected aspects of music and culture from antiquity to 1600, with emphasis on writing and research.

Effective: Fall 2010

Prerequisite: MUSIC 261 MUSIC 331

MUSIC 462W

Studies in Music History: 1550-1750 (3 per semester/maximum of 6) In-depth study of selected aspects of music and culture from 1550-1750, with emphasis on writing and research.

Effective: Fall 2010

Prerequisite: MUSIC 261 MUSIC 331

MUSIC 463W

Studies in Music History: 1700-1900 (3 per semester/maximum of 6) In-depth study of selected aspects of music and culture from 1700-1900, with emphasis on writing and research.

Effective: Fall 2010

Prerequisite: MUSIC 262 MUSIC 331

MUSIC 464W

Studies in Music History: 1850-Present (3 per semester/maximum of 6) In-depth study of selected aspects of music and culture from 1850 to the present, with emphasis on writing and research.

Effective: Fall 2010

Prerequisite: MUSIC 262 MUSIC 332

MUSIC 465

Advanced Conducting I (3) Advanced instruction in conducting; conducting techniques specific to instrumental or choral music; emphasis on score study and rehearsal technique.

Effective: Summer 1994

Prerequisite: MUSIC 366

MUSIC 466

Advanced Conducting II (2 per semester/maximum of 8) Standard scores of symphonies, tone poems, operas, oratorios, and shorter vocal and instrumental works studied from the viewpoint of the conductor.

Effective: Spring 1995

Prerequisite: MUSIC 465

MUSIC 467

Opera Workshop (1-3 per semester/maximum of 6) History, analysis, and production of operas from sixteenth century to present.

Effective: Spring 2001

Prerequisite: audition

MUSIC 471

Structural and Sixteenth-Century Counterpoint (2) Advanced species counterpoint and its application to the sixteenth-century style.

Effective: Fall 1983

Prerequisite: MUSIC 222 MUSIC 232

MUSIC 472

Eighteenth-Century Counterpoint (2) Imitative and nonimitative counterpoint in the style of Bach.

Effective: Fall 1983

Prerequisite: MUSIC 222 MUSIC 232

MUSIC 473J

Composition VII (3) Composition instruction for fourth-year composition majors.

Effective: Fall 2012

Prerequisite: MUSIC 374J

MUSIC 474J

Composition VIII (3) Composition instruction for fourth-year composition majors.

Effective: Fall 2012

Prerequisite: MUSIC 473J

MUSIC 476W

B.A. Senior Project (3) A semester project appropriate to student's option in B.A. program (e.g., research paper, performance with program notes, or related paper).

Effective: Spring 1992

Prerequisite: seventh-semester standing

MUSIC 478

Vocal Literature (3) Introduction to the literature for solo voice in opera, oratorio, cantata, art song, and chamber music from the baroque to the present.

Effective: Spring 1997

Prerequisite: MUSIC 262 MUSIC 331

MUSIC 480

Opera Literature (3) Studies in the development of the opera from 1600 to the present, treating both libretto and music.

Effective: Spring 1997

Prerequisite: MUSIC 262 MUSIC 331

MUSIC 481

Keyboard Literature (3) Studies in the development of keyboard music and instruments; a survey of all eras using listening, analysis, and performance.

Effective: Spring 1997

Prerequisite: MUSIC 262 MUSIC 331

MUSIC 483

Seminar in Voice Pedagogy (2) Survey of literature relevant to the teaching of voice from historical sources through recent pedagogical scholarship.

Effective: Spring 2004

Prerequisite: MUSIC 418

MUSIC 485

Chamber Music Literature (3) Survey of chamber music for strings, winds, and brass instruments from the mid-16th century to the present day.

Effective: Spring 1997

Prerequisite: MUSIC 262 MUSIC 331

MUSIC 487

Orchestral Literature (3) Survey of orchestral literature.

Effective: Spring 1997

Prerequisite: MUSIC 262 MUSIC 331

MUSIC 489

Studio and Recital Accompaniment (1 per semester/maximum of 4) Advanced keyboard accompaniment of student soloists in the studio and in public performance under faculty supervision.

Effective: Fall 1983

Prerequisite: MUSIC 194 or permission of instructor

MUSIC 493

Sonata Duos (1 per semester/maximum of 4) Preparation for performance of advanced sonata literature for various individual instruments with keyboard.

Effective: Fall 1983

Prerequisite: MUSIC 193 or equivalent; permission of instructor

MUSIC 494

Research Topics (1-3 per semester/maximum of 6) Supervised research leading to senior thesis or project.

Effective: Fall 2012

MUSIC 494H

Research Topics (1-3 per semester/maximum of 6) Supervised research leading to senior thesis or project.

Effective: Fall 2012

MUSIC 495A

Student Teaching: General Music (5-7) Observation and teaching under supervision.

Effective: Fall 2001

Prerequisite: completion of all courses in the major with a grade of "C" or better

MUSIC 495B

Student Teaching: Choral Music (5-7) Observation and teaching under supervision.

Effective: Fall 2001

Prerequisite: completion of all courses in the major with a grade of "C" or better

MUSIC 495C

Student Teaching: Instrumental Music (5-7) Observation and teaching under supervision.

Effective: Fall 2001

Prerequisite: completion of all courses in the major with a grade of "C" or better

MUSIC 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

MUSIC 496H

Independent Studies - Honors (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Summer 2011

MUSIC 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

PERCN 100J (GA)

Percussion: Secondary (1 per semester, maximum of 8) Individual instruction in percussion one-half hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

PERCN 110J (GA)

Percussion: Secondary (2 per semester, maximum of 16) Individual instruction in percussion one hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

PHOTO 100 (GA)

Introduction to Photography (3) An introduction to the aesthetics, history, and science of photography including practical and critical approaches to the art of photography.

Effective: Spring 2006

PHOTO 400

Digital Photography in the Studio (4) Concepts and technology of the digital photography studio; large format digital cameras, electronic studio lighting and digital printing.

Effective: Fall 2006

Prerequisite: PHOTO 200

PHOTO 402

Photographic Narratives (4 per semester/maximum of 8) The development of a photographic project that leads to the creation of a handmade book.

Effective: Fall 2006

Prerequisite: PHOTO 200

PHOTO 405

Creative Projects in Photography (4 per semester/maximum of 8) Special individual problems related to photographic vision.

Effective: Fall 2006

Prerequisite: PHOTO 201 PHOTO 300

STRNG 100J (GA)

Violin: Secondary (1 per semester, maximum of 8) Individual instruction in violin one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 101J (GA)

Viola: Secondary (1 per semester, maximum of 8) Individual instruction in viola one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 102J (GA)

Violoncello: Secondary (1 per semester, maximum of 8) Individual instruction in violoncello one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 103J (GA)

Double Bass: Secondary (1 per semester, maximum of 8) Individual instruction in double bass one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 110J (GA)

Violin: Secondary (2 per semester, maximum of 16) Individual instruction in violin one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 111J (GA)

Viola: Secondary (2 per semester, maximum of 16) Individual instruction in viola one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 112J (GA)

Violoncello: Secondary (2 per semester, maximum of 16) Individual instruction in violoncello one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 113J (GA)

Double Bass: Secondary (2 per semester, maximum of 16) Individual instruction in double bass one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

THEA 001S

First-Year Seminar: Theatre Production Practices (1) An orientation to the School of Theatre production practices, resources, faculty, and practicum.

Effective: Spring 2006

Prerequisite: admission into Theatre Program

THEA 080 (GA)

Pit Orchestra (1-3 per semester/maximum of 3) Rehearsal and performance of contemporary and historical musical theatre styles, including operetta and light opera.

Effective: Summer 2008

Prerequisite: audition

THEA 100 (GA;US;IL)

The Art of the Theatre (3) An experiential survey of all aspects of the living theatre, as presented by a resident company of theatre artists.

Effective: Spring 2006

THEA 102 (GA)

Fundamentals of Acting (3) Introduction to the art and craft of acting for non-theatre majors.

Effective: Fall 2003

THEA 103

Fundamentals of Directing (3) Training and experience in basic skills of directing. Designed for non- theatre majors.

Effective: Fall 1983

THEA 104

Fundamentals of Theatre Production (3) Training and experience in basic skills of technical theatre. Designed for non-theatre majors.

Effective: Fall 1983

THEA 105 (GA)

Introduction to Theatre (3) An introduction and overview of the history, craft, and art of the theatre to foster an informed appreciation of theatrical events. This course is an alternate to THEA 100.

Effective: Spring 2003

THEA 112 (GA)

Introduction to Musical Theatre (3) A survey of music theatre as an art form.

Effective: Spring 2012

THEA 113

Musical Theatre Theory I (3) Studies in the fundamentals of music notation and sight-singing.

Effective: Summer 2000

Prerequisite: admission into Musical Theatre Option

THEA 114

Music Theatre: Form and Analysis (3) A survey of music theatre as an art form.

Effective: Summer 1993

Prerequisite: admission into Musical Theatre Option

THEA 120

Acting I (3) Fundamental skills and training in acting. Emphasis on physical/vocal awareness and the nature of dramatic communication. Theatre majors only.

Effective: Spring 2008

Prerequisite: THEA 100 or THEA 105

THEA 146

Basic Theatrical Makeup (2) Both straight and corrective makeup, with character and styling techniques for stage, film, and television.

Effective: Summer 1989

THEA 150

Fundamentals of Design for the Theatre (3) Exploration of the philosophy and technique of scenic, costume, and lighting design.

Effective: Spring 2008

THEA 170

Introduction to Stage Lighting Production Techniques (3) Introduction to theatre lighting facilities, equipment, and practice. Practical experience with major productions.

Effective: Fall 1998

Prerequisite: THEA 150

THEA 180

Introduction to Stagecraft (3) Introduction to methods, materials, equipment, facilities, and concepts used in scenery

construction for the Theatre. Practical experience with departmental productions.

Effective: Fall 1998

Prerequisite: THEA 150

THEA 189 (GA)

Theatre Production Practicum (1 per semester/maximum of 6)* Supervised experience in theatre by crew participation in University theatre productions. For non-theatre students only.

Effective: Spring 2004

THEA 198

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Summer 1994

THEA 199 (IL)

Foreign Studies--Theatre Arts (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

Prerequisite: approval by department

THEA 207 (GA;US)

Gender and Theatre (3) A study of theatre and drama literature as formed by issues of gender, race, and ethnic background.

Effective: Summer 2005

THEA 208 (AF AM 208) (GA;US;IL)

Workshop: Theatre in Diverse Cultures (3) A performance-oriented class which explores the historic and contemporary theatrical works of various culturally diverse peoples.

Effective: Spring 2013

THEA 208S (GA;US;IL)

Workshop: Theatre in Diverse Cultures (3) A performance-oriented class, which explores the historic and contemporary theatrical works of various culturally diverse peoples.

Effective: Summer 2005

THEA 210

Hip Hop Theatre Performance Workshop (3 per semester/maximum of 9) Hip Hop Theatre Performance Workshop expands on the Hip Hop Theatre lecture component and experience from Hip Hop Theatre, and delves more into a performance and workshop structure. Students will apply themes studied in Hip Hop THEA 209 or DANCE 271 to this course, which focuses on performance experiences.

Effective: Spring 2015

Prerequisite: THEA 209 or DANCE 411 or permission of the program

THEA 212

Musical Theatre Theory III (3) Intermediate studies in diatonic harmony, analysis, sight-singing and dictation.

Effective: Fall 2016

Prerequisite: THEA 116

THEA 214

Musical Theatre Theory IV (3) Advanced studies in the technique and practice of chromatic harmonic analysis and sight-singing.

Effective: Fall 2016

Prerequisite: THEA 113 THEA 114 THEA 212

THEA 220

Acting II (3) Principles of acting through improvisation, exercises, and character analysis, with emphasis on basic skills of voice and movement. For theatre majors only.

Effective: Spring 2001

Prerequisite: THEA 120

THEA 221

Acting III (3) A continuation of Thea. 220. For Theatre majors only.

Effective: Spring 2008

Prerequisite: THEA 130 or THEA 131 and School of Theatre approval

THEA 222

Acting Laboratory (2) Laboratory experience in student-directed scenes and/or one-act plays.

Effective: Spring 2014

Prerequisite: THEA 120

THEA 223

Musical Theatre Performance I (2) Studio training in the unique performance skills, repertoire and business of professional music theatre.

Effective: Spring 2006

Prerequisite: THEA 114 THEA 115 THEA 116 THEA 212 admission into Musical Theatre option

THEA 224

Musical Theatre Performance II (2) Studio training in the unique performance skills, repertoire and business of professional music theatre.

Effective: Spring 2006

Prerequisite: THEA 223 admission into Musical Theatre Option

THEA 251

Theatre Drafting Techniques (2) Introduction to drafting of floor plans, section drawings, construction graphics, and mechanical perspective for the theatre.

Effective: Spring 2001

THEA 252

Design Presentation Techniques (1) Media and materials exploration; sketching, rendering, and modeling methods.

Effective: Fall 1983

THEA 253

Scene Painting (1) Introduction to painting scenery for the theatre; methods and materials.

Effective: Fall 1983

THEA 260

Introduction to Costume Design (3) Introduction to costume design process through character analysis and the use of color, line, and texture.

Effective: Spring 2006

THEA 270

Introduction to Lighting Design (3 per semester/maximum of 99) This course will focus on helping each student to develop a design process that takes them from script to stage.

Effective: Spring 2006

THEA 282 (GA)

Production Practicum (3--may repeat once for a total of 6) Introduction to all aspects of theatre production--analysis, design, construction, production, performance--for non-theatre majors.

Effective: Spring 2000

THEA 289

Theatre Production Practicum (1 per semester/maximum of 3) Supervised experience in production techniques.

Effective: Summer 2000

THEA 296

Independent Studies (1-18) Creative projects, including research and design, supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

THEA 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a subject which may be topical or of special interest.

Effective: Fall 1983

THEA 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Summer 1994

THEA 322

Voice and Speech I (2) Vocal techniques for the actor: articulation, voice control, support, and projection.

Effective: Spring 1990

Prerequisite: THEA 120

THEA 324

Movement for Actors I (2) Techniques and skills in physical expression, awareness, control, and stage movement.

Effective: Spring 1990 Ending: Fall 2016

Prerequisite: THEA 120

THEA 324

Movement for Actors I (2) Techniques and skills in physical expression, awareness, control, and stage movement.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: THEA 120 or THEA 115

THEA 325

Movement for Actors II (2) Continuation of THEA 324.

Effective: Spring 1990

Prerequisite: THEA 324

THEA 326

Music Theatre Performance Workshop (1 per semester/maximum of 3) Performance studies in cabaret, revue, and club environments.

Effective: Spring 2008

Prerequisite: DANCE 234 THEA 224 audition enrollment in Musical Theatre Option

THEA 327

Musical Theatre Auditions (2) Research and preparation of auditions for work in professional musical theatre venues.

Effective: Summer 2004

Prerequisite: THEA 224

THEA 398

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Summer 1994

THEA 400

Advanced Theatre Projects (1-6 per semester) Individual and group-directed study of in-depth projects involving reading, discussion, performance, and critical analysis by faculty.

Effective: Spring 1991

Prerequisite: seventh-semester standing or 12 credits in theatre or related areas

THEA 401 (IL)

Theatre History I: Ancient to 1700 (3) Survey of drama and theatre from primitive rites through the Renaissance.

Effective: Fall 2016

Prerequisite: THEA 100 or THEA 105

THEA 402

Theatre History II: From 1700 to Present (3) Survey of European drama and theatre from the eighteenth century through the modern period.

Effective: Spring 2012

Prerequisite: THEA 401

THEA 405W (US)

Theatre History: American Theatre (3) Survey of American drama and theatre from the colonial period to the present.

Effective: Fall 2016

Prerequisite: THEA 100

THEA 407 (WMNST 407) (US)

Women and Theatre (3) A study of theatre practice and dramatic literature as informed by issues of gender, race, and ethnic background.

Effective: Spring 2008 Ending: Fall 2016

Prerequisite: THEA 100 or THEA 105

THEA 407W (WMNST 407) (US)

Women and Theatre (3) A study of theatre practice and dramatic literature as informed by issues of gender, race, and ethnic background.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: THEA 100 or THEA 105

THEA 408W (US)

History of American Musical Theatre (3) A survey of the history of American musical theatre presented in a social, cultural, and aesthetic prospective.

Effective: Fall 2016

Prerequisite: THEA 100 or THEA 105

THEA 410

Play Analysis (3) Advanced skills in textual analysis of plays and screenplays.

Effective: Spring 2008

Prerequisite: THEA 100 or THEA 105

THEA 412 (AF AM 412) (US;IL)

African American Theatre (3) Exploration of the development of African American theatre from its roots in Africa through the diaspora, to the present time.

Effective: Spring 2013

Prerequisite: THEA 100 or THEA 105

THEA 420

Scene Study I (3 per semester/maximum of 9) Advanced monologue and scene study techniques. Principal focus on realism.

Effective: Spring 2013

Prerequisite: THEA 221 AND APPROVAL BY THE DEPARTMENT

THEA 423

Musical Theatre Performance III (2) Studio training in the unique performance skills, repertoire and business of professional musical theatre.

Effective: Spring 2006

Prerequisite: THEA 224 seventh-semester standing in the Musical Theatre Option

THEA 424

Musical Theatre Performance IV (2) Studio training in the unique performance skills, repertoire and business of professional musical theatre.

Effective: Spring 2006

Prerequisite: THEA 423

THEA 426

Children's Theatre (3) Theories and practice of theatre for children.

Effective: Spring 2001

Prerequisite: THEA 150 THEA 220

THEA 428

Musical Theatre Performance Studio V (2) Students will prepare and present workshop reading of a new musical theatre piece.

Effective: Spring 2016

Prerequisite: THEA 224

THEA 429

Theatre Performance Practicum (1-3 per semester) Supervised experience in rehearsal and performance of significant roles.

Effective: Fall 1983

Prerequisite: admission by audition only

THEA 434

Introduction to Directing (3) Introduction to principles and procedures of play direction.

Effective: Summer 2012

Prerequisite: THEA 114 or THEA 410 ; THEA 170 or THEA 180

THEA 436

Directorial Processes (3) Preparing a play for production including the scoring of the script, developing ground plan, casting, and staging projects in American realism.

Effective: Spring 1991

Prerequisite: THEA 434 and approval of instructor prior to registration

THEA 437

Artistic Staff for Production (1-6) To provide students with experience in choreography, dramaturgy, combat, staging, voice/speech, musical direction, assisting in direction, for major productions.

Effective: Summer 1989

Prerequisite: approval of the proposed assignment by the instructor prior to registration

THEA 440

Principles of Playwriting (3 per semester/maximum of 6) Structure, dramatic effect, characterization, and dialogue; the writing, reading, and criticism of original one-act plays.

Effective: Spring 2013

Prerequisite: THEA 100 or THEA 105

THEA 447

Make-Up Design for Production (1-6) Materials, research, preparation, design, execution of make-up for major University Theatre productions.

Effective: Summer 1989

Prerequisite: approval of proposed assignment by the instructor prior to registration

THEA 450

Advanced Topics in Scene Design (3 per semester/maximum of 6) Design emphasis on a variety of production techniques, genre, and styles.

Effective: Spring 2006

Prerequisite: THEA 250 or portfolio review

THEA 451

Drafting, Drawing, and Painting for the Theatre (1) Drafting, freehand drawing including perspective methods and property development, rendering techniques, and painters' elevations.

Effective: Summer 1993

Prerequisite: THEA 251 THEA 252 and prior approval of instructor; first-year MFA theatre candidacy

THEA 453

Advanced Scene Painting (1 per semester, maximum of 12) Practicum study in painting techniques currently in professional use. Exploration of tools, available paints, and texturing materials.

Effective: Spring 1991

Prerequisite: THEA 253

THEA 454

Period Research for the Theatre (3) History of decor, styles, and movements in art and architecture.

Effective: Summer 1993

Prerequisite: BFA theatre arts candidacy or permission of instructor

THEA 456

Scenic Projects for Production (1 per semester, maximum of 6) Special projects for production; painting, properties, design assistance.

Effective: Summer 1993

Prerequisite: approval of proposed projects by instructor prior to registration

THEA 457

Scene Design for Production (1 per semester/maximum of 6) Design and execution of production projects.

Effective: Fall 1983

Prerequisite: approval of proposed project by instructor prior to registration

THEA 459

Theatre Portfolio & Business Practices (2) Life as a professional theatre designer. Contracts, taxes, record-keeping, resumes, portfolios, interviewing, job hunting, and legal considerations.

Effective: Spring 2006

Prerequisite: B.F.A. Theatre candidacy

THEA 460

Advanced Topics in Costume Design (3 per semester/maximum of 6) Developing and executing a design concept in a variety of the performing arts.

Effective: Spring 2006

Prerequisite: THEA 260 THEA 464

THEA 461

Advanced Topics in Costume Construction and Technology (3 per semester/maximum of 6) A specialized course in advanced costume construction techniques and theatrical costume technologies.

Effective: Spring 2006

Prerequisite: THEA 261

THEA 464

History of Fashion (3) Survey of dress from Egyptian period to contemporary fashion.

Effective: Spring 2008

Prerequisite: THEA 100 or THEA 105

THEA 465

History of Fashion II (3) Survey of dress from 1800 to contemporary fashion.

Effective: Summer 2004

Prerequisite: THEA 100 or THEA 105

THEA 466

Costume Construction for Production (1 per semester/maximum of 6) Execution of production projects in construction and shop management.

Effective: Fall 1983

Prerequisite: approval of proposed project by instructor prior to registration

THEA 467

Costume Design for Production (1 per semester/maximum of 6) Design and execution of production design projects.

Effective: Fall 1983

Prerequisite: approval of proposed project by instructor prior to registration

THEA 470

Advanced Topics in Lighting Design (3 per semester/maximum of 6) Advanced Topics in Lighting Design will rotate through opera, dance, non-traditional spaces, architecture, advanced technology, and color theory.

Effective: Spring 2006 Ending: Fall 2016

Prerequisite: THEA 270

THEA 470

Advanced Topics in Lighting Design (3 per semester/maximum of 9) Advanced Topics in Lighting Design will rotate through opera, dance, non-traditional spaces, architecture, advanced technology, and color theory.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: THEA 270

THEA 477

Lighting Design for Production (1 per semester/maximum of 6) Design and execution of design projects.

Effective: Fall 1983

Prerequisite: approval of proposed project by instructor prior to registration

THEA 480B

Technical Production IV (3) Discussion of problems of the technical director: personnel management, time management, scheduling, budgeting, purchasing, and the technical drawing of production.

Effective: Spring 1995

Prerequisite: THEA 381

THEA 481

Stage and Production Management (3) Production planning, scheduling, assignment of personnel, rehearsal procedures, and budgeting.

Effective: Fall 1983

Prerequisite: THEA 170 THEA 180

THEA 482

Technical Production - Rigging (3) In-depth exploration of current rigging techniques used in entertainment.

Effective: Fall 2013

THEA 485

Sound for Theatre Production (3 per semester/maximum of 6) Aesthetics of live and recorded sound; recording and editing techniques for the stage.

Effective: Fall 2012

Prerequisite: THEA 100 THEA 150

THEA 486

Stage Management for Production (1-9) Stage manager for University Theatre production.

Effective: Summer 1996

Prerequisite: approval of proposed assignment by instructor prior to registration

THEA 487

Technical Projects for Production (1 per semester/maximum of 6) Execution of practical production projects.

Effective: Fall 1983

Prerequisite: approval of proposed project by instructor prior to registration

THEA 489

Theatre Production Practicum (1 per semester) Supervised experience in production techniques. For theatre majors only.

Effective: Summer 2012

Prerequisite: THEA 160 or THEA 180

THEA 495

Internship Practicum (1-6 per semester/maximum of 12) Professional field experience in theatre performance, production, and management assignments.

Effective: Fall 1983

Prerequisite: approval of internship by instructor prior to registration

THEA 496

Independent Studies (1-18) Creative projects, including research and design, supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

THEA 496H

Independent Studies - Honors (1-18) Creative projects, including research and design, supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Spring 2012

THEA 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

THEA 498

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Summer 1994

VOICE 100J (GA)

Voice: Secondary (1 per semester, maximum of 8) Individual instruction in voice one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

VOICE 110J (GA)

Voice: Secondary (2 per semester, maximum of 16) Individual instruction in voice one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 100J (GA)

Flute: Secondary (1 per semester, maximum of 8) Individual instruction in flute one-half hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 101J (GA)

Oboe: Secondary (1 per semester, maximum of 8) Individual instruction in oboe one-half hour per week. For both music and non-music students.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 102J (GA)

Clarinet: Secondary (1 per semester, maximum of 8) Individual instruction in clarinet one-half hour per week. For both music and non-music students.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 103J (GA)

Bassoon: Secondary (1 per semester, maximum of 8) Individual instruction in bassoon one-half hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 104J (GA)

Saxophone: Secondary (1 per semester, maximum of 8) Individual instruction in saxophone one-half hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 110J (GA)

Flute: Secondary (2 per semester, maximum of 16) Individual instruction in flute one hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 111J (GA)

Oboe: Secondary (2 per semester, maximum of 16) Individual instruction in oboe one hour per week. For both music and non-music students.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 112J (GA)

Clarinet: Secondary (2 per semester, maximum of 16) Individual instruction in clarinet one hour per week. For both music and non-music students.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 113J (GA)

Bassoon: Secondary (2 per semester, maximum of 16) Individual instruction in bassoon one hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 114J (GA)

Saxophone: Secondary (2 per semester, maximum of 16) Individual instruction in saxophone one hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

B.A. Degree Requirements: Humanities

1084 Courses

AAS 100 (AM ST 160) (GH;US)

Introduction to Asian American Studies (3) An introduction to the history, literature, and culture of Asian America.
Effective: Fall 2013

AAS 428 (ENGL 428) (US)

Asian American Literatures (3 per semester/maximum of 6) A seminar on the literatures and cultures of Asian America, with attention to forms of geographic, historical, and ethnic diversity.
Effective: Summer 2010

AF AM 083S (GH;US;IL)

First-Year Seminar in African American Studies (3) Cultural, philosophical, economic, political, and global dynamics of the Black experience in the United States and the Diaspora.
Effective: Fall 2013

AF AM 101 (WMNST 101) (GH;US)

The African American Woman (3) The sociological, historical, and political experiences of African American women, their roles and contributions to society.
Effective: Spring 2013

AF AM 101U (GH;US)

The African American Woman (3) The sociological, historical, and political experiences of African American women, their roles and contributions to society.
Effective: Fall 2016 Ending: Fall 2016

AF AM 132 (SPAN 132, AFR 132) (IL)

Afro-Hispanic Civilization (3) A general introduction to human and cultural elements of African origin in Spanish- and Portuguese-speaking countries of Latin America.
Effective: Spring 2013

AF AM 139 (ENGL 139) (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.
Effective: Fall 2013

AF AM 145 (RL ST 145) (GH;US;IL)

African American Religions and Spirituality (3) History and significance of the religious dimension of the Black American struggle for equality from enslavement to the contemporary period.
Effective: Spring 2015

AF AM 146 (RL ST 146) (GH;US)

The Life and Thought of Martin Luther King, Jr. (3) A survey of the civil rights leader including his religious beliefs, intellectual development, and philosophy for social change.
Effective: Spring 2013

AF AM 147 (RL ST 147) (GH;US)

The Life and Thought of Malcolm X (3) The life of Malcolm X/El Hajj Malik El Shabazz (1925-1965) and his social, political, economic, and moral thought.
Effective: Fall 2013

AF AM 152 (HIST 152) (GH;US;IL)

African American History (3) African roots; colonial and revolutionary experiences; slavery and abolitionism; civil war and reconstruction; accommodation and protest; the new militancy.
Effective: Fall 2013

AF AM 210 (HIST 210) (GH;US)

Freedom's First Generation: African American Life and Work, 1865 to World War II (3) The course will explore the context and events that shaped African American life over the period 1896-1932.
Effective: Spring 2015
Prerequisite: AF AM 100 HIST 021

AF AM 211 (HIST 211) (GH;US;IL)

Slavery and Freedom in the Black Atlantic (3) The course will explore the history and role of African and African-descent people in Africa, the Americas, and Europe.
Effective: Spring 2015
Prerequisite: AF AM 100 or HIST 003 or HIST 020 or HIST 021 or HIST 152

AF AM 235 (ENGL 235) (US)

From Folk Shouts and Work Songs to Hip Hop Poetry (3) The origins, forms, and function of the oral folk tradition of African Americans.
Effective: Spring 2015
Prerequisite: ENGL 015 or ENGL 030

AF AM 250 (HIST 250) (GH;IL)

Introduction to the Modern Caribbean (3) A survey course which, explores the historical evolution and emergence of the

modern Caribbean.
Effective: Fall 2012

AF AM 422 (CAS 422) (US)

Contemporary African American Communication (3) A focused study on the continuities between African and African American culture and communication.

Effective: Spring 2013

Prerequisite: CAS 100

AF AM 469 (ENGL 469) (US)

Slavery and the Literary Imagination (3) The impact of slavery on the petitions, poetry, slave narratives, autobiographies, and novels of African Americans.

Effective: Fall 2012

Prerequisite: ENGL 015 or ENGL 030

AFR 191 (HIST 191) (GH;IL)

Early African History (3) Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750.

Effective: Fall 2012

AFR 192 (HIST 192) (GH;IL)

Modern African History (3) Impact of the slave trade, expansion of Islam, colonial conquest, social and cultural transformations, resistance, nationalism, and independence.

Effective: Fall 2012

AM ST 050 (GH)

The Literature and Lore of Mining (3) Experience and values of mining tradition: survey of the literature and lore, including field research.

Effective: Spring 2004

AM ST 083S (GH)

First-Year Seminar in American Studies (3) Critical approaches to the interdisciplinary study of American culture.

Effective: Summer 1999

AM ST 100 (GH;US)

Introduction to American Studies (3) A study of selected attempts to identify and interpret movements and patterns in American culture.

Effective: Spring 2006

Prerequisite: third-semester standing

AM ST 100Y (GH;US)

Introduction to American Studies (3) A study of selected attempts to identify and interpret movements and patterns in American culture.

Effective: Spring 2006

Prerequisite: third-semester standing

AM ST 104 (WMNST 104) (GH;US)

Women and the American Experience (3) Selected aspects of the role of women in United States history and culture from colonial to modern times.

Effective: Summer 2005

AM ST 105 (ENGL 105) (GH;US)

American Popular Culture and Folklife (3) Survey of popular culture, folklife, and ethnicity, synthesizing material from such areas as literature, media, entertainment, print, music, and film.

Effective: Fall 2008

AM ST 134 (ENGL 134) (GH)

American Comedy (3) Studies in American comedy and satire, including such writers as Mark Twain, Faulkner, Vonnegut, Ellison, O'Connor, Welty, and Heller.

Effective: Fall 2016

AM ST 135 (ENGL 135) (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.

Effective: Fall 2013

AM ST 140Y (RL ST 140Y) (GH;US)

Religion in American Life and Thought (3) The function, contributions, tensions, and perspectives of religion in American culture.

Effective: Summer 2005

AM ST 160 (AAS 100) (GH;US)

Introduction to Asian American Studies (3) An introduction to the history, literature, and culture of Asian America.

Effective: Fall 2013

AM ST 196 (ENGL 196, AMSTD 196) (GH;US)

Introduction to American Folklore (3) A basic introduction to verbal and non-verbal folklore stressing the basic procedures of collection, classification, and analysis.

Effective: Summer 2005

AM ST 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.
Effective: Spring 1995

AM ST 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

AM ST 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.
Effective: Summer 1994

AM ST 295

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.
Effective: Fall 2007
Prerequisite: prior approval of proposed assignment by instructor

AM ST 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.
Effective: Fall 1983

AM ST 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.
Effective: Fall 1983

AM ST 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

AM ST 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

AM ST 421 (PHIL 401)

American Philosophy (3) Survey of key figures and movements in American thought, including the Transcendentalists, the Pragmatists, and contemporary developments.
Effective: Fall 2007
Prerequisite: 9 credits of philosophy or 6 credits of philosophy at the 200-level or 5th semester standing

AM ST 422 (RL ST 422)

Religion and American Culture (3 per semester, maximum of 6) Selected topics, problems, or historical movements in American religion; relation between religion and American culture.
Effective: Summer 1996

AM ST 432

Ethnicity and the American Experience (3) Theoretical and conceptual framework of ethnic studies: examination of specific issues related to major American ethnic and racial groups.
Effective: Fall 2007

AM ST 439

American Regional Cultures (3-6) An interdisciplinary study of the culture of a region of the United States, such as the south or the west.
Effective: Fall 2007
Prerequisite: seventh-semester standing

AM ST 447 (HIST 447) (US)

Recent American History (3) Contemporary economic, social, and political aspects of the United States and its role as a world power since 1945.
Effective: Spring 2014
Prerequisite: HIST 021 3 additional credits in history economics or political science

AM ST 491W

American Themes, American Eras (3-6) Interdisciplinary American culture course on major themes and eras such as the American Revolutionary Era or the 1930s.
Effective: Fall 2007
Prerequisite: seventh-semester standing

AM ST 493 (ENGL 493)

The Folktale in American Literature (3) A survey of the literary uses of the folktale and legendary materials, with particular concentration on the literature of America.
Effective: Spring 1986
Prerequisite: ENGL 015 or ENGL 030

AM ST 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.
Effective: Summer 1994

AM ST 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

AM ST 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

AM ST 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

AM ST 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ANTH 146 (GS;US)

North American Indians (3) An introduction to the cultures of the indigenous peoples of North America, north of Mexico, and the effect of contact.

Effective: Spring 2006

ANTH 220 (GA;GH;IL)

Anthropology and Art/ifacts (3) This course examines anthropological approaches to the study of art works, their production, and function in diverse human societies, both past and present.

Effective: Summer 2012

APLNG 427 (CHNS 427) (IL)

Chinese Language, Culture and Society (3) The study of Chinese language and culture and a perspective on the way of life in contemporary Chinese society.

Effective: Spring 2016

Prerequisite: ASIA 100 or equivalent

ARAB 110 (GH;IL)

Arab Language, Cultures, and Current Topics (3) Fourth-semester Modern Standard Arabic: study of cultures through authentic discourse, texts, film; development of reading, writing, listening, speaking skills.

Effective: Summer 2010

Prerequisite: ARAB 003 or permission of program

ARAB 165 (HIST 165, RL ST 165) (IL)

Introduction to Islamic Civilization (3) Islamic history, culture, and religious life c.600-1500 C.E.

Effective: Spring 2006

ASIA 003 (RL ST 003) (GH;US;IL)

Introduction to the Religions of the East (3) Religious experience, thought, patterns of worship, morals, and institutions in relation to culture in Eastern religions.

Effective: Spring 2015

ASIA 004 (CMLIT 004) (GH;IL)

Introduction to Asian Literatures (3) Comparative interpretations of narrative, drama, lyric, and other writings from East Asia and other regions, viewed as world literature.

Effective: Fall 2010

ASIA 083S (GH;IL)

Asian Studies First Year Seminar (3) The meaning and advantages of a Liberal Arts education in context of a specific discipline.

Effective: Fall 2015

ASIA 100 (GH;IL)

What is Asia? (3) An introduction to the history, literatures, politics, and cultures of Asia.

Effective: Fall 2012

ASIA 104 (RL ST 104) (GH;US;IL)

Introduction to Buddhism (3) A general survey of the basic doctrine, practice, and historical development of Hinayana and Mahayana Buddhism.

Effective: Spring 2015

ASIA 120Y (GH;IL)

South Asia: A Literary History (3) The course traces the cultural history of South Asia by studying its literary tradition from ancient to modern times.

Effective: Summer 2014

ASIA 171 (HIST 171) (GH;IL)

Introduction to South Asian History 2: Early Modern to Contemporary (3) An introduction to South Asian history from early modern to contemporary times.

Effective: Spring 2015

ASIA 172 (HIST 172, JAPNS 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.
Effective: Fall 2016

ASIA 174 (HIST 174) (GH;IL)

The History of Traditional East Asia (3) Comparative cultural, institutional, and social history of traditional China and Japan to their contact with the industrialized West.
Effective: Fall 2016

ASIA 175 (HIST 175) (GH;IL)

The History of Modern East Asia (3) Survey of modern East Asian history and civilizations, from the nineteenth century to roughly the present day.
Effective: Fall 2016

ASIA 181 (RL ST 181) (IL)

Introduction to the Religions of China and Japan (3) A survey of the history, philosophy, and cultural impact of the major Far Eastern religions: Confucianism, Taoism, Buddhism, and Shinto.
Effective: Spring 2015

ASIA 182 (HIST 182) (GH;IL)

Asian Trade: Economy, Industrialization and Capitalism in Asia (3) An historical overview of economy, industrialization, globalization and capitalism in Asia from the 16th century to present.
Effective: Summer 2014

ASIA 183 (HIST 183) (GH;IL)

Gender, Family, and Society in East Asia (3) Investigates the history of gender, family, love, and sex in East Asia.
Effective: Summer 2012

ASIA 184 (HIST 184) (GH;IL)

Society and Culture in the Pacific War (3) Examines the role of society and culture in the Pacific War's causes, contexts, realities, and aftermath.
Effective: Summer 2012

ASIA 185 (HIST 185) (GH;IL)

Asian Pop: The History of Popular Culture in Asia (3) A history of popular culture from the early modern period to the present.
Effective: Summer 2014

ASIA 189 (HIST 189) (GH;IL)

Illicit Asia: An Alternative Introduction to Asia (3) A historical introduction to unlawful, illegitimate and forbidden ideas, goods, people and places in modern Asia.
Effective: Summer 2014

ASIA 404 (CMLIT 404) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan.
Effective: Fall 2010
Prerequisite: 3 credits in literature or related field appropriate to this course

ASIA 404Y (CMLIT 404Y) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan, taught with focus on written analysis and interpretation.
Effective: Summer 2013

ASIA 405

Seminar in Asian Studies (3-6 per semester/maximum of 6) Advanced seminar in Asian Studies
Effective: Summer 2013
Prerequisite: ASIA 100

ASIA 405Y (IL)

Seminar in Asian Studies (3-6 per semester/maximum of 6) An advanced, writing-focused seminar in Asian Studies.
Effective: Fall 2009
Prerequisite: ASIA 100

ASIA 475Y (HIST 475Y) (IL)

The Making and Emergence of Modern India (3) India's transition to social, economic, and political modernity through the experience of British colonial rule and the nationalist struggle.
Effective: Spring 2015
Prerequisite: HIST 010 HIST 011 HIST 172 HIST 175 HIST 176 HIST 181 or HIST 191

ASIA 480 (HIST 480) (IL)

Japan in the Age of Warriors (3) An overview of Japan from the 10th to 17th century, a period of political decentralization, cultural efflorescence, and social change.
Effective: Fall 2014

ASIA 481 (HIST 481) (IL)

Modern Japan Since 1800 (3) The transformation of Japan from a relatively isolated, agricultural nation into a highly industrialized world power.
Effective: Fall 2014
Prerequisite: HIST 172 HIST 174 or HIST 175

ASIA 483 (HIST 483) (IL)

Middle China (3) The social, political, and cultural issues and developments from the 8th to 16th century.

Effective: Spring 2015

Prerequisite: HIST 174

ASIA 484Y (HIST 484Y) (IL)

History of Chinese Thought (3) A study of the dynamic historical development of Chinese thought with its diverse expressions from antiquity to the present.

Effective: Fall 2014

Prerequisite: HIST 174 or HIST 175

ASIA 485Y (HIST 485Y) (IL)

China's Last Empire: The Qing Dynasty, 1644-1911 (3) China from 1644 founding of Qing dynasty to 1911 fall; Chinese society and institutions, imperialism and China's internal diversity.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H

ASIA 486 (HIST 486) (IL)

China in Revolution (3) China from 1900 to the present; nationalism, cultural change; development of communism.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H

CAMS 001 (GH)

Greek and Roman Literature (3) Selected readings within a chronological and thematic context of significant and influential masterworks of Greece and Rome.

Effective: Spring 2004

CAMS 004 (J ST 004, RL ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationships to culture.

Effective: Summer 2005

CAMS 010 (GH;IL)

Mesopotamian Civilization (3) Cultural, technological, literary, political, and economic achievements of peoples who occupied the region of Mesopotamia (4,000-331 B.C.E.), in historical context.

Effective: Spring 2006

CAMS 012 (J ST 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

CAMS 015 (GH)

Wonders of the Ancient World (3) Overview of ancient world by focusing on the famed "Seven Wonders" and similar achievements from 3000 B.C.E.-1st Century C.E.

Effective: Spring 2003

CAMS 020 (GH)

Egyptian Civilization (3) The culture, history, literature, and archaeology of ancient Egypt from the dawn of history to the Greco-Roman period.

Effective: Fall 2005

CAMS 025 (GH;IL)

Greek Civilization (3) The origin and development of the ancient Greek people; their political and social institutions, public and private life.

Effective: Summer 2005

CAMS 033 (GH;IL)

Roman Civilization (3) Origin of the Romans; sociopolitical development; food, homes, education, marriage, family life, amusements, private and public worship.

Effective: Summer 2005

CAMS 044 (RL ST 044) (GH;IL)

Ancient Near Eastern and Egyptian Mythology (3) Survey of major ancient Mediterranean myths, gods, and goddesses in their cultural contexts; influence on later cultures.

Effective: Summer 2005

CAMS 045 (GH;IL)

Classical Mythology (3) Introduction to Greek and Roman divinities, heroes and heroines; survey of the major myths and their influence on Western culture.

Effective: Summer 2005

CAMS 050 (GH)

Words: Classical Sources of English Vocabulary (3) An introduction to English word forms stressing the most frequently occurring Latin and Greek elements and their derivatives.

Effective: Fall 2004

CAMS 083S (GH;IL)

First-Year Seminar in Classics and Ancient Mediterranean Studies (3) Critical approach to the study of ancient Mediterranean languages, literatures, and/or material cultures.

Effective: Summer 2005

CAMS 090 (J ST 090, RL ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from earliest times (c. 3000 BCE) to present.

Effective: Fall 2015

CAMS 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CAMS 100 (HIST 100) (GH;IL)

Ancient Greece (3) Greek world from the earliest Aegean cultures to the death of Alexander the Great and the beginnings of Hellenistic civilization.

Effective: Spring 2006

CAMS 101 (HIST 101) (GH;IL)

The Roman Republic and Empire (3) History of the Roman Republic and Empire from the origins of Rome to the disintegration of the Empire.

Effective: Spring 2006

CAMS 102 (HIST 102, J ST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

CAMS 104 (HIST 104) (GH)

Ancient Egypt (3) The history and archaeology of ancient Egypt from the dawn of history to the Greco-Roman period.

Effective: Summer 2002

CAMS 105 (GH;IL)

History of the Ancient Near East (3) History of the Ancient Near East from the end of the Neolithic to the Hellenistic period.

Effective: Summer 2005

CAMS 109Y (GH;IL)

Writing Systems of the World (3) Writing intensive overview of the world's writing systems throughout history.

Effective: Spring 2007

CAMS 110 (J ST 110, RL ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.

Effective: Summer 2005

CAMS 111 (J ST 111, RL ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.

Effective: Summer 2005

CAMS 115 (GH;IL)

Literature of the Ancient Near East (3) Reading and study of literary works from the Ancient Near East, especially from Mesopotamia and Ancient Egypt.

Effective: Fall 2016

CAMS 120 (J ST 120, RL ST 120) (GH)

New Testament (3) Introduction to the history, literature, and religion of early Christianity in the Jewish-Hellenistic setting.

Effective: Spring 2004

CAMS 121 (RL ST 121, J ST 112) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the context of first century Palestinian Judaism.

Effective: Fall 2015

CAMS 122 (J ST 122, RL ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

CAMS 123 (J ST 123, RL ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

CAMS 124 (J ST 124, RL ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.

Effective: Summer 2005

CAMS 134 (RL ST 134) (GH;IL)

Archaeology of Biblical Israel (3) Archaeology of Biblical Israel from 1200 B.C.E. to c. 640 C.E.; relationship between archaeological and textual evidence.

Effective: Fall 2015

CAMS 140 (GH;IL)

Classical Archaeology--Ancient Greece (3) Literary sources and material evidence for society; culture of the inhabitants of Greece in ancient times.

Effective: Summer 2005

CAMS 150 (GH;IL)

Classical Archaeology--Ancient Rome (3) Literary sources for the development of Roman civilization in relation to the relevant archaeological discoveries.

Effective: Summer 2005

CAMS 151 (HEBR 151, J ST 151)

Introductory Biblical Hebrew (3) Fundamentals of Biblical Hebrew grammar, syntax, and vocabulary.

Effective: Summer 2005

CAMS 152 (HEBR 152, J ST 152)

Intermediate Biblical Hebrew (3) Intermediate study of Biblical Hebrew grammar, syntax, and vocabulary.

Effective: Summer 2011

CAMS 153 (J ST 153, RL ST 153) (GH;IL)

Dead Sea Scrolls (3) Examines the discovery, contents, and interpretations of the Dead Sea Scrolls, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

CAMS 160 (J ST 160, RL ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.

Effective: Summer 2014

CAMS 180 (HIST 180) (GH;IL)

Ancient Warfare (3) Historical survey of the evolution of warfare in the ancient Mediterranean region from prehistoric times to the Later Roman Empire.

Effective: Summer 2006

CAMS 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1997

CAMS 198

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 2005

CAMS 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CAMS 200 (PHIL 200) (GH)

Ancient Philosophy (3) Examines the thought and influence of major Western thinkers from the pre-Socratics to the neo-Platonists, emphasizing Plato and Aristotle.

Effective: Fall 2003

CAMS 250U (GH;IL)

Honors Classics in Literature and Film (3) This honors course explores the Classical Tradition as it thrives in the literature of later epochs and film.

Effective: Summer 2010

CAMS 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 1997

CAMS 295

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Spring 2001

Prerequisite: prior approval of proposed assignment by instructor

CAMS 296

Independent Studies (1-18) Creative projects, including research and design, that are supervised on an individual basis and that fall outside the scope of formal courses.

Effective: Spring 1997

CAMS 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1996

CAMS 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 2005

CAMS 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CAMS 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

CAMS 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 2005

CAMS 398

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 2005

CAMS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CAMS 400W

Comparative Study of the Ancient Mediterranean World (3) Comparative study of ancient Mediterranean civilizations.

Effective: Spring 2001

Prerequisite: 3 credits in Classics and Ancient Mediterranean Studies

CAMS 405 (IL)

Law & Economy in the Ancient Near East (3) This course is an overview of the legal and economic texts and institutions in the Ancient Near East.

Effective: Spring 2009

Prerequisite: 6 credits in any undergraduate CAMS courses.

CAMS 410

Classical Epic (3) Homer, Hellenistic Epic, and Vergil; influences on later epic.

Effective: Spring 1998

CAMS 411W

Classical Drama (3) Masterpieces of Greek tragedy (Aeschylus, Sophocles, Euripides) and comedy (Aristophanes, Menander); their influence on Roman writers.

Effective: Spring 2001

CAMS 440W

Studies in Classical and Ancient Mediterranean Archaeology (3-6) Selected topics in the literary sources and material evidence for classical and ancient Mediterranean society.

Effective: Summer 2000

Prerequisite: 3 credits from: ANTH 002 ART H 311 CAMS 010 CAMS 020 CAMS 025 CAMS 033 CAMS 140 CAMS 150 HIST 100 HIST 101

CAMS 442 (KINES 442) (IL)

Sport in Ancient Greece and Rome (3) An examination of the continuity of sport in Greek and Roman societies.

Effective: Spring 2008

Prerequisite: CAMS 025 CAMS 033 CAMS 140 CAMS 150 CAMS 100 CAMS 101 or KINES 141

CAMS 471

Sumerian (3) Introduction to the Sumerian language and the cuneiform writing system.

Effective: Spring 2009

Prerequisite: 6 credits in any undergraduate CAMS course.

CAMS 472

Akkadian (3) Introduction to the Akkadian language (Babylonian & Assyrian) and the cuneiform writing system.

Effective: Spring 2009

Prerequisite: 6 credits in any undergraduate CAMS courses

CAMS 480 (J ST 480)

Greeks and Persians (3) Development and achievements of the Achaemenid kingdom; relationships between Persians and Greeks.

Effective: Spring 2001

Prerequisite: CAMS 010 CAMS 025 or CAMS 100

CAMS 490

Ancient Mediterranean Languages (3-6) Variable topic study of an ancient language of the Mediterranean basin and related areas, other than Greek, Latin, or Hebrew.

Effective: Summer 2011

Prerequisite: LATIN 003

CAMS 492

Intermediate Field Methods (3-6) On-site experience in archaeological fieldwork in the ancient Mediterranean region.

Effective: Spring 2000

Prerequisite: approval by field school director

CAMS 493

Intermediate Field Analysis (3-6) On-site experience in archaeological analysis in the ancient Mediterranean region.

Effective: Spring 2000

Prerequisite: approval by field school director

CAMS 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 1997

CAMS 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2001

CAMS 495

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships.

Written and oral critique of activity required.

Effective: Summer 1999

CAMS 496

Independent Studies (1-18) Creative projects, including research and design, that are supervised on an individual basis and that fall outside the scope of formal courses.

Effective: Fall 1996

CAMS 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1997

CAMS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CAS 084S (GH)

First-Year Seminar in Communication Arts and Sciences (3) Introduction to significant issues surrounding effective human communication; humanities emphasis.

Effective: Summer 2002

CAS 175 (GH)

Persuasion and Propaganda (3) An introductory examination of how symbols have been used to create belief and action in revolutionary, totalitarian, and democratic settings.

Effective: Spring 2003

CAS 201 (GH)

Rhetorical Theory (3) History and theory of public advocacy and civic discourse.

Effective: Spring 2003

CAS 411

Rhetorical Criticism (3) Principles of rhetorical criticism examined through analysis of selected texts and critics.

Effective: Spring 2003

Prerequisite: CAS 201 or CAS 100

CAS 415

Rhetoric of Film and Television (3) Rhetorical analysis of the artistic forms and cultural structures of film and television; intensive study of selected examples.

Effective: Spring 2003

Prerequisite: CAS 100 or COMM 150

CAS 420

Rhetorical Theory (3) Ancient, medieval, Renaissance, Enlightenment, and contemporary theories of rhetoric.

Effective: Spring 2003

Prerequisite: CAS 201

CAS 422 (AF AM 422) (US)

Contemporary African American Communication (3) A focused study on the continuities between African and African American culture and communication.

Effective: Spring 2013

Prerequisite: CAS 100

CAS 426W

Communication Ethics (3) Ethical issues in public and private communication; role of communication in expressing and realizing individual and social values.

Effective: Spring 2003

Prerequisite: CAS 100

CAS 475

Studies in Public Address (3) History and criticism of public discourse; intensive analysis of selected public addresses and social movements.
Effective: Spring 2003
Prerequisite: CAS 100

CAS 480

Group Performance of Literature (3) Applying storytelling skills and performance theory to the group presentation of literature; criticism of literature through group presentations.
Effective: Spring 2003
Prerequisite: CAS 100

CC 200

Introduction to Corporate Communication (3) Introduces fundamental concepts, theories, and practices in Corporate Communication and is a lower division gateway to the major.
Effective: Spring 2016
Prerequisite: ENGL 015

CHNS 120 (GH;IL)

Introduction to Chinese Literature and Culture (3) Chinese cultural productions, classical through contemporary; literature and film; changing cultural settings in multiple Chinese-speaking locations. Taught in English.
Effective: Spring 2010

CHNS 121 (GH;IL)

Chinese Film and New Media (3) Survey of Chinese film and new media in the twentieth century and beyond, with attention to changing cultural settings. Taught in English.
Effective: Spring 2010

CHNS 402 (IL)

Level Three Chinese B (4) Readings in representative works of traditional and modern literature; practice in composition; study of aspects of Chinese culture.
Effective: Spring 2011
Prerequisite: CHNS 401 OR EQUIVALENT

CHNS 410 (IL)

Chinese Through Film (3) This course is designed for students who finish Level Two Chinese or higher and aims to help them develop Chinese proficiency through movies.
Effective: Summer 2013
Prerequisite: CHNS 110 or equivalent

CHNS 426 (IL)

The Chinese Rhetorical Tradition (3 per semester/maximum of 6) Study of the rhetorical works in ancient China as well as multiple facets of modern Chinese rhetoric.
Effective: Summer 2011
Prerequisite: 3 credits in ENGL 015

CHNS 427 (APLNG 427) (IL)

Chinese Language, Culture and Society (3) The study of Chinese language and culture and a perspective on the way of life in contemporary Chinese society.
Effective: Spring 2016
Prerequisite: ASIA 100 or equivalent

CMLIT 001 (GH;IL)

Introduction to Western Literatures Through the Renaissance (3) Introductory comparative survey of European and American literatures of Ancient through Renaissance periods, considering genre, themes, cultural and literary values.
Effective: Spring 2005

CMLIT 002 (GH;IL)

Introduction to Western Literatures Since the Renaissance (3) Introductory comparative survey of European and American literatures, post-Renaissance through Modern, considering genre, themes, cultural, and literary values.
Effective: Summer 2005

CMLIT 003 (GH;IL)

Introduction to African Literatures (3) Comparative analysis of drama, essay, novel, poetry, and stories from traditional oral forms to contemporary expressions of African literary styles.
Effective: Summer 2005

CMLIT 004 (ASIA 004) (GH;IL)

Introduction to Asian Literatures (3) Comparative interpretations of narrative, drama, lyric, and other writings from East Asia and other regions, viewed as world literature.
Effective: Fall 2010

CMLIT 005 (GH;US;IL)

Introduction to Literatures of the Americas (3) Comparative interpretation of the oral and written literary traditions of North, Central, and South America.
Effective: Summer 2005

CMLIT 006 (PHIL 006) (GH;IL)

Philosophy and Literature in Western Culture (3) Explores fundamental issues of human existence through the traditions of western literature and philosophy.
Effective: Spring 2006

CMLIT 010 (GH;IL)

World Literatures (3) The development of literature around the world--from epic, legend, lyric, etc. in the oral tradition to modern written forms.

Effective: Fall 2015

CMLIT 011 (GH;IL)

The Hero in World Literature (3) The figure of the hero/heroine examined in world literature as a vehicle for expressing social and cultural values.

Effective: Summer 2005

CMLIT 012 (GH;IL)

Introduction to World Drama and Performance (3) The power, ethics, and excitement of drama and related forms of performance literature, presented in a global and comparative context.

Effective: Summer 2010

CMLIT 013 (GH;IL)

Virtual Worlds: Antiquity to the Present (3) Virtual worlds from ancient to postmodern, in a comparative and global context that includes literature, film, and online multiplayer games.

Effective: Summer 2010

CMLIT 083S (GH;IL)

First-Year Seminar in Comparative Literature (3) International topics in literature and culture; each seminar will have a specific topic as announced (see the Comparative Literature Web site).

Effective: Summer 2005

CMLIT 097

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Summer 1995

CMLIT 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CMLIT 100 (GH;IL)

Reading Across Cultures (3) Comparative approaches (studying international literary periods, themes, genres, etc.) and principles of literary interpretation introduced through readings representing various cultures.

Effective: Fall 2010

CMLIT 101 (GH;US;IL)

Race, Gender, and Identity in World Literature (3) Identity and race, gender and heritage, centrality and marginality, self and other, as expressed in literary works from around the world.

Effective: Fall 2010

CMLIT 105 (GH;IL)

The Development of Literary Humor (3) Literary humor expressed as satire, comedy, and farce--from ancient times to the present--in an international and multicultural context.

Effective: Summer 2005

CMLIT 106 (GH;IL)

The Arthurian Legend (3) The growth and development of the legend of King Arthur, from medieval Europe to modern Japan.

Effective: Summer 2005

CMLIT 107 (GH;IL)

Exploration, Travel, Migration, and Exile (3) An international selection of journey narratives, from the real to the imaginary; travel narratives as critiques of self and society.

Effective: Spring 2011

CMLIT 108 (GH;IL)

Myths and Mythologies (3) World mythology: myths primarily of non-Western cultures, based on selected areas and traditions around the world.

Effective: Summer 2005

CMLIT 109 (GH;US;IL)

Native American Myths, Legends, and Literatures (3) Myths, legends, and literatures of Native American cultures.

Effective: Spring 2006

CMLIT 110 (J ST 131) (GH;US;IL)

Jewish Literature: An International Perspective (3) Literature of the Jewish tradition in various cultures and contexts, such as Europe, Israel, Islamic countries, and the Americas.

Effective: Spring 2011

CMLIT 111 (GH;IL)

Introduction to Literatures of India (3) Narrative, lyric, religious, oral, and dramatic literature, as well as film from India studied in translation from a global perspective.

Effective: Summer 2005

CMLIT 116 (J ST 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.

Effective: Summer 2015

CMLIT 120 (GH;IL)

The Literature of the Occult (3) Important literary works dealing with witchcraft, demonology, vampirism, ghosts, and related concepts, from biblical times to present.

Effective: Spring 2006

CMLIT 122 (GH;US;IL)

Global Science Fictions (3) A study of the relationships between science, literature, and film, from an international and interdisciplinary perspective.

Effective: Summer 2010

CMLIT 132 (GH;IL)

Nobel Prize Literature (3) Introduction to Nobel Prize winning literature and the culture of the prize in international and historical context.

Effective: Summer 2010

CMLIT 140 (GH;IL)

Literature and the Other Arts: International and Comparative Perspectives (3) A comparative, international examination of the relationship between literature and non-literary art forms.

Effective: Summer 2010

CMLIT 141 (GH;US;IL)

Religion and Literature (3) Major religious themes as expressed in literary masterpieces; sacred texts from various cultures read as literature.

Effective: Summer 2005

CMLIT 142 (GH;IL)

The Psychology of World Literature (3) A comparative, psychological approach to world literature from the perspectives of writer, narrative, character, and reader.

Effective: Summer 2010

CMLIT 143 (GH;US;IL)

Human Rights and World Literature (3) Human rights violations discussed in tandem with their literary representation, presented in a global and comparative context.

Effective: Summer 2010

CMLIT 153 (GH;IL)

International Cultures: Film and Literature (3) Comparison of narrative techniques employed by literature and film in portraying different cultures, topics may vary each semester.

Effective: Spring 2011

CMLIT 184 (ENGL 184) (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the Nineteenth and Twentieth Century.

Effective: Spring 2006

CMLIT 185 (ENGL 185) (GH;IL)

World Novel (3) Development of the modern novel in the last century (outside the British Isles and the United States); lectures, discussions, readings in translation.

Effective: Spring 2011

CMLIT 189 (ENGL 189) (GH;IL)

Modern Drama (3) Playwrights who set the world's stage for twentieth-century drama; issues that continue to shape the contemporary theatrical world.

Effective: Spring 2011

CMLIT 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Summer 1995

CMLIT 199 (IL)

Foreign Study--Comparative Literature (3-6) Course offered on comparative literary topics as part of a foreign-study program.

Effective: Summer 2005

CMLIT 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1995

CMLIT 295

Internship (1-18) Supervised off-campus, non-group instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1997

CMLIT 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Summer 1995

CMLIT 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Summer 1995

CMLIT 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Summer 1995

CMLIT 300H

Honors Thesis (3) Individual projects involving research, reading, and writing; preparation of an honors thesis in comparative literature or world literature.

Effective: Summer 1995

Prerequisite: Participation in the University Scholars program

CMLIT 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

CMLIT 399 (IL)

Foreign Study--Comparative Literature (3-6) Special course offered on comparative literary topics as part of a foreign-study program.

Effective: Summer 2005

Prerequisite: third-semester standing

CMLIT 400Y (US;IL)

Senior Seminar in Literary Criticism and Theory (3) Discussions of theories of literature, of literary criticism, and particularly of the distinct methods of comparative study; individual projects.

Effective: Spring 2006

Prerequisite: seventh-semester standing; 18 credits in literature

CMLIT 401Y (IL)

The Western Literary Heritage I (3) Major literary movements and authors in the literature of the Western world from the beginnings through the early Renaissance.

Effective: Spring 2006

Prerequisite: 3 credits in literature or history

CMLIT 402Y (US;IL)

The Western Literary Heritage II (3) Major literary movements and authors in the literature of the Western world from the late Renaissance to the present time.

Effective: Spring 2006

Prerequisite: 3 credits in literature or history

CMLIT 403 (LTNST 403) (US)

Latino/a Literature and Culture (3) Literary and other forms of cultural expression (film, music, art, and theater) are compared across different Latina/o communities.

Effective: Spring 2011

Prerequisite: 3 credits in the humanities or in any LTNST course or 4th-semester proficiency in Spanish

CMLIT 404 (ASIA 404) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan.

Effective: Spring 2011

Prerequisite: 3 credits in literature or related field appropriate to this course

CMLIT 405 (US;IL)

Inter-American Literature (3) This course examines the development of literature in Canada, the United States, Spanish America, the Caribbean area, and Brazil.

Effective: Spring 2006

Prerequisite: 3 credits in literature

CMLIT 406 (IL)

Women and World Literature (3) Literature written by women, especially women from non-Western cultures; the spectrum of genres in which women writers have excelled.

Effective: Spring 2006

Prerequisite: 3 credits in literature or in women's studies

CMLIT 408 (IL)

Heroic Literature (3) Traditional heroes, their traits and adventures; typical themes and examples chosen from the epics and sagas of world literature.

Effective: Spring 2006

Prerequisite: 3 credits in literature or folklore

CMLIT 410 (IL)

Literary Translation: Theory and Practice (3) Emphasizing literary translation, a study of the theoretical and practical problems encountered in the processes of translation, transmission, and interpretation.

Effective: Spring 2011

Prerequisite: 18 credits in a foreign language

CMLIT 415 (GH;US;IL)

World Graphic Novels (3) Critical analyses of form, genre, medium, and discourse of the graphic novel and its historical precedents in an international and comparative context.

Effective: Summer 2010

Prerequisite: 3 credits in literature

CMLIT 422 (IL)

African Drama (3) Traditional and popular drama forms; modern anglophone and francophone drama; nationalism and social criticism in contemporary African drama.

Effective: Spring 2006

CMLIT 423 (IL)

African Novel (3) From traditional oral narratives to modern autobiographical, historical, satirical, sociological, and allegorical forms; novelist as social critic.

Effective: Spring 2006

CMLIT 429 (ENGL 429)

New Media and Literature (3) New media literary genres; critical discussion of creative works in digital media.

Effective: Summer 2010

CMLIT 430 (IL)

Global Modernisms (3) A comparative investigation of global Modernisms, with an emphasis on the relations between modernism, modernity, and modernization.

Effective: Summer 2010

Prerequisite: 3 credits in literature

CMLIT 443 (US;IL)

Transatlantic Literature (3 per semester/maximum of 6) Comparative literary and cultural relations across the Atlantic Ocean; may include Europe, Africa, the Americas, and/or the Caribbean.

Effective: Spring 2011

Prerequisite: 3 credits in literature

CMLIT 446 (IL)

Postcolonial Literature and Culture (3) Postcolonial literature and theory in a comparative and international context.

Effective: Summer 2010

Prerequisite: 3 credits in the study of literature

CMLIT 449 (IL)

Literary Cultures of Islam (3) Comparative discussion of the literary cultures of Islam from the seventh century to the present.

Effective: Summer 2010

Prerequisite: 3 credits in the study of literature

CMLIT 453 (COMM 453) (IL)

Narrative Theory: Film and Literature (3) Comparative study of the aesthetics and techniques of film and literature; close analyses of masters of each art form.

Effective: Fall 2006

Prerequisite: COMM 150 or 3 credits in literature

CMLIT 459

Topics in Theory (3) Selected topics in this history of theory and literary criticism within a global, comparative context.

Effective: Summer 2010

Prerequisite: 3 credits in literature

CMLIT 470 (IL)

The Modern Novel (3) Major novels of Joyce, Proust, Kafka, Thomas Mann, Nabokov, and others; their contributions to the art of the novel.

Effective: Spring 2011

Prerequisite: 3 credits in literature

CMLIT 480 (IL)

The International Folktale (3) Traditional tales from various parts of the world: their origin, characteristics, forms; their transmission as oral narrative and written literature.

Effective: Spring 2006

Prerequisite: 3 credits in literature or folklore

CMLIT 486 (IL)

Tragedy (3) Development of tragic drama and its relationship to social background and philosophical theory.

Effective: Spring 2006

CMLIT 487 (IL)

Comedy (3) Development of comic drama and its relationship to social background and philosophical theory.

Effective: Spring 2006

CMLIT 488 (ENGL 488) (IL)

Modern Continental Drama (3) From Ibsen to the drama of today: Strindberg, Chekhov, Hauptmann, Pirandello, Ionesco, Beckett, Genet, and others.

Effective: Spring 2006

Prerequisite: ENGL 015 or ENGL 030

CMLIT 490 (GAME 460)

Video Game Lit Studies (3) A comparative look at the nature and history of video games as cultural artifacts, from Pond to online role-playing.

Effective: Spring 2015

Prerequisite: GAME 160 GAME 140 or 3 credits in literature

CMLIT 491 (IL)

Literary Adaptation: International and Comparative Perspectives (3) A comparative, international study of adaptations between literature and other media (film, theater, photography, music).

Effective: Summer 2010

Prerequisite: 3 credits in literature or other fields relevant to this course

CMLIT 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1995

CMLIT 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

CMLIT 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Summer 1995

CMLIT 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Summer 1995

CMLIT 498

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Summer 1995

CMLIT 499 (IL)

Foreign Study--Comparative Literature (3-6) Advanced courses offered on comparative literary topics as part of a foreign-study program.

Effective: Summer 2005

Prerequisite: 18 credits or equivalent in the appropriate foreign language; 6 credits in literature or related field appropriate to this course

COMM 110 (GH)

Media and Democracy (3) This course considers the role of the mass media with regard to developing civic awareness and engagement in democratic societies.

Effective: Spring 2009

COMM 453 (CMLIT 453) (IL)

Narrative Theory: Film and Literature (3) Comparative study of the aesthetics and techniques of film and literature; close analyses of masters of each art form.

Effective: Fall 2006

Prerequisite: COMM 150 or 3 credits in literature

CRIMJ 469 (HIST 469)

Drugs and Drug Policy in the United States (3) Examines the history and dimensions of drug use and analyzes the impact of drug policy.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or HIST 021

EM SC 150 (S T S 150) (GN;IL)

Out of the Fiery Furnace (3) A history of materials, energy and man, with emphasis on their interrelationships. For nontechnical students.

Effective: Spring 2006

EM SC 240

Energy and Sustainability in Contemporary Culture (3) Critical evaluation of selected media (e.g., books, film) in contemporary culture on topics related to energy and sustainability.

Effective: Summer 2016

ENGL 001 (GH)

Understanding Literature (3) Explores how major fiction, drama, and poetry, past and present, primarily English and American, clarify enduring human values and issues.

Effective: Spring 2003

ENGL 001W (GH)

Understanding Literature (3) Studies the various critical ways of reading, understanding, and writing about fiction, poetry, and drama.

Effective: Spring 1999

ENGL 002 (GH)

The Great Traditions in English Literature (3) Major works of fiction, drama, and poetry from the Middle Ages to the twentieth century expressing enduring issues and values.

Effective: Spring 2000

ENGL 003S (GH)

The Great Traditions in American Literature (3) Major works of fiction, drama, and poetry from the colonial to the modern periods expressing enduring issues and values.

Effective: Fall 2002

ENGL 006

Creative Writing Common Time (1 per semester/maximum of 8) Required one hour a week meeting time; readings, professional development, advising, community-building.

Effective: Fall 2007

ENGL 083S (GH)

First-Year Seminar in English (3) Critical approaches to the dimensions and directions in English/American literature and rhetoric.

Effective: Summer 1999

ENGL 088 (GH)

Australian/New Zealand Cultural Perspectives (3) Australian and New Zealand cultural and social perspectives, with emphasis on the historical development of intellectual, aesthetic, and humanistic values.

Effective: Spring 2001

ENGL 097

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ENGL 098

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ENGL 100

English Language Analysis (3) An examination of English sounds, words, and syntax using traditional, structural, and transformational grammar.

Effective: Spring 1984

ENGL 103 (GH;US)

The Great Traditions in American Literature (3) Major works of fiction, drama, and poetry from the colonial to the modern periods expressing enduring issues and values.

Effective: Spring 2013

ENGL 104 (J ST 104) (GH)

The Bible as Literature (3) Study of the English Bible as a literary and cultural document.

Effective: Fall 2015

ENGL 105 (AM ST 105) (GH;US)

American Popular Culture and Folklife (3) Survey of popular culture, folklife, and ethnicity, synthesizing material from such areas as literature, media, entertainment, print, music, and film.

Effective: Fall 2008

ENGL 110

Newsriting Practicum (2 per semester, maximum of 6) Practice in writing and editing articles for the campus newspaper.

Effective: Fall 2001

ENGL 129 (GH)

Shakespeare (3) A selection of the major plays studied to determine the sources of their permanent appeal. Intended for non-majors.

Effective: Spring 2003

ENGL 129H (GH)

Shakespeare (3) A selection of the major plays studied to determine the sources of their permanent appeal. Intended for non-majors.

Effective: Summer 2012

ENGL 130 (GH)

Reading Popular Texts (3) Popular texts (printed, visual, and aural texts) and their social, political, and cultural significance in the contemporary world.

Effective: Fall 2007

Prerequisite: ENGL 015 or ENGL 030H

ENGL 133 (GH)

Modern American Literature to World War II (3) Cather, Eliot, Frost, Faulkner, Fitzgerald, Hemingway, Hurston, Wharton, Wright, and other writers representative of the years between the world wars.

Effective: Spring 2002

ENGL 134 (AM ST 134) (GH)

American Comedy (3) Studies in American comedy and satire, including such writers as Mark Twain, Faulkner, Vonnegut, Ellison, O'Connor, Welty, and Heller.

Effective: Fall 2016

ENGL 135 (AM ST 135) (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.

Effective: Fall 2013

ENGL 135S (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.

Effective: Summer 2005

ENGL 136 (GH)

The Graphic Novel (3) The graphic novel as a literary and visual form (produced primarily in English).

Effective: Summer 2010

ENGL 139 (AF AM 139) (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.

Effective: Fall 2013

ENGL 139S (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.

Effective: Fall 2006

ENGL 140 (GH)

Contemporary Literature (3) Writers such as Baldwin, Beckett, Bellow, Ellison, Gordimer, Lessing, Lowell, Mailer, Naipaul, Pinter, Plath, Pynchon, Rushdie, and Walker.

Effective: Spring 2003

ENGL 145 (GH;IL)

Modern Irish Literature (3) Irish literature in the twentieth century and beyond; focus on the interplay of political, social, and cultural, forces on literature.

Effective: Spring 2007

ENGL 180 (GH)

Literature and the Natural World (3) Literary representations of the natural world, focusing on English language traditions.

Effective: Spring 2003

ENGL 182A (GH;US;IL)

Literature and Empire (3) Literature written in English from countries that were once part of European empires, e.g., India, Canada, South Africa, and others.

Effective: Summer 2005

ENGL 182C (GH;IL)

Literature and Empire (3) Literature written in English from countries that were once part of European empires, e.g., India, Canada, South Africa, and others.

Effective: Summer 2005

ENGL 184 (CMLIT 184) (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the nineteenth and twentieth centuries.

Effective: Spring 2006

ENGL 184S (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the nineteenth and twentieth centuries.

Effective: Spring 2006

ENGL 185 (CMLIT 185) (GH;IL)

World Novel (3) Development of the modern novel in the last century (outside the British Isles and the United States); lectures, discussions, readings in translation.

Effective: Spring 2011

ENGL 189 (CMLIT 189) (GH;IL)

Modern Drama (3) Playwrights who set the world's stage for twentieth-century drama; issues that continue to shape the contemporary theatrical world.

Effective: Spring 2011

ENGL 191 (GH)

Science Fiction (3) Science fiction as the literature of technological innovation and social change--its development, themes, and problems.

Effective: Summer 1995

ENGL 192 (GH)

The Literature of Fantasy (3) Literature(s) of fantasy from early forms through a variety of contemporary traditions.

Effective: Spring 2011

ENGL 194 (WMNST 194) (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by English, American, and other English-speaking women writers.

Effective: Summer 2005

ENGL 194S (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by English, American, and other English-speaking women writers.

Effective: Summer 2005

ENGL 196 (AM ST 196, AMSTD 196) (GH;US)

Introduction to American Folklore (3) A basic introduction to verbal and nonverbal folklore stressing the basic procedures of collection, classification, and analysis.

Effective: Summer 2005

ENGL 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1995

ENGL 198

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ENGL 199 (IL)

Foreign Study--English (3-6) Studies in English language and/or literature.

Effective: Summer 2005

ENGL 200

Introduction to Critical Reading (3) Responses to a variety of literary texts written in English that evoke different approaches.

Effective: Fall 1991

Prerequisite: ENGL 015 or ENGL 030

ENGL 200W

Introduction to Critical Reading (3) Responses to a variety of literary texts written in English that evoke different approaches.

Effective: Fall 2001

Prerequisite: 6 credits of ENGL ENLSH or LIT

ENGL 201 (GH)

What is Literature (3) Acquaints students with theory and practice relevant to studies of narrative, lyric poetry, and drama.

Effective: Summer 2006

Prerequisite: ENGL 015 or ENGL 030

ENGL 201H (GH)

What is Literature (3) Acquaints students with theory and practice relevant to studies of narrative, lyric poetry, and drama.

Effective: Summer 2012

Prerequisite: ENGL 015 or ENGL 030

ENGL 209

Journal or Magazine Practicum (1-6 per semester/maximum of 8) A practicum in the editing and publishing of a magazine or journal.

Effective: Fall 2007

ENGL 210

The Process of Writing (3) Examination of the relation between fiction and nonfiction; practice in principles common to all writing.

Effective: Fall 1985

Prerequisite: ENGL 015 or ENGL 030

ENGL 212

Introduction to Fiction Writing (3) Written exercises and short readings in the elements of fiction writing; the writing of at least one short story.

Effective: Fall 1985

Prerequisite: ENGL 015 or ENGL 030

ENGL 213

Introduction to Poetry Writing (3) Written exercises in the components and techniques of poetry writing in conjunction with selected readings.

Effective: Fall 1985

Prerequisite: ENGL 015 or ENGL 030

ENGL 215

Introduction to Article Writing (3) Written exercises in, and a study of, the principles of article writing; practice in the writing of specific articles.

Effective: Fall 1985

Prerequisite: ENGL 015 or ENGL 030

ENGL 221 (GH)

British Literature to 1798 (3) Introduction to literary history and analysis; Beowulf and writers such as Chaucer, Shakespeare, Donne, Milton, Swift, Pope, and Fielding.

Effective: Spring 2016

Prerequisite: ENGL 015 ; ENGL 030 ; ENGL 137H ; or ENGL 138T

ENGL 221W

British Literature to 1798 (3) Introduction to literary history and analysis. Beowulf and writers such as Chaucer, Shakespeare, Donne, Milton, Swift, Pope, and Fielding.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 222 (GH)

British Literature from 1798 (3) Introduction to literary history and analysis; writers such as Austen, Wordsworth, Keats, Browning, Dickens, The Brontes, Yeats, Joyce, and Woolf.

Effective: Spring 2016

Prerequisite: ENGL 015 ; ENGL 030 ; ENGL 137H ; or ENGL 138T

ENGL 222W

British Literature from 1798 (3) Introduction to literary history and analysis. Writers such as Austen, Wordsworth, Keats, Browning, Dickens, the Brontes, Yeats, Joyce, and Woolf.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 226 (LTNST 226) (GH;US;IL)

Latina and Latino Border Theories (3) English 226 will constitute a wide-ranging examination of contemporary texts (1960-present) central to the construction of contemporary Latino/a culture.

Effective: Spring 2007

ENGL 231 (GH)

American Literature to 1865 (3) Introduction to literary history and analysis; writers such as Bradstreet, Franklin, Emerson, Hawthorne, Douglass, Thoreau, Fuller, Melville, Whitman, and Dickinson.

Effective: Spring 2016

Prerequisite: ENGL 015 ; ENGL 030 ; ENGL 137H ; or ENGL 138T

ENGL 231W

American Literature to 1865 (3) Introduction to literary history and analysis. Writers such as Bradstreet, Franklin, Emerson, Hawthorne, Douglass, Thoreau, Fuller, Melville, Whitman, and Dickinson.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 232 (GH)

American Literature from 1865 (3) Introduction to literary history and analysis; writers such as Mark Twain, James, Cather, Frost, O'Neill, Faulkner, Hemingway, Hughes, and Morrison.

Effective: Spring 2016

Prerequisite: ENGL 015 ; ENGL 030 ; ENGL 137H ; or ENGL 138T

ENGL 232W

American Literature from 1865 (3) Introduction to literary history and analysis. Writers such as Mark Twain, James, Cather, Frost, O'Neill, Faulkner, Hemingway, Hughes, and Morrison.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 233 (CHEM 233) (GH;GN)

Chemistry and Literature (3) Exploration of key concepts of chemistry, the reciprocal influence of chemistry and literature through history, and the relationship of science to society, culture, and values.

Effective: Spring 2006

ENGL 235 (AF AM 235) (US)

From Folk Shouts and Songs to Hip Hop Poetry (3) The origins, forms, and function of the oral folk tradition of African Americans.

Effective: Spring 2015

Prerequisite: ENGL 015 or ENGL 030

ENGL 240

Exploring Literary Traditions (3 per semester, maximum of 6) The examination of specific literary traditions in English-language texts and an inquiry into the question of tradition itself. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 250

Peer Tutoring in Writing (3) Introduction to skills and attitudes required for successful peer tutoring in writing. Provides internship experience in a writing center.

Effective: Spring 1987

Prerequisite: ENGL 202A ENGL 202B ENGL 202C or ENGL 202D ; approval of department

ENGL 261

Exploring Literary Forms (3 per semester/maximum of 6) The examination of specific genres in English-language texts and an inquiry into the question of genre itself. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 262 (GH)

Reading Fiction (3) Elements of fiction including plot, character, viewpoint, and fictional genres in British, American, and other English-language traditions.

Effective: Spring 2003

Prerequisite: ENGL 015 or ENGL 030

ENGL 263 (GH)

Reading Poetry (3) Elements of poetry including meter, rhyme, image, diction, and poetic forms in British, American, and other English-language traditions.

Effective: Spring 2003

Prerequisite: ENGL 015 or ENGL 030

ENGL 265 (GH)

Reading Nonfiction (3) Forms of nonfictional prose such as autobiography, biography, essay, letter, memoir, oration, travelogue in British, American, and other English-language traditions.

Effective: Spring 2003

Prerequisite: ENGL 015 or ENGL 030

ENGL 268 (GH)

Reading Drama (3) Elements of drama including plot, character, dialogue, staging, and dramatic forms in British, American, and other English-language traditions.

Effective: Spring 2003

Prerequisite: ENGL 015 or ENGL 030

ENGL 281

Television Script Writing (3) An introduction to the writing of scripts for television production.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 294

Research Topics (1-12) Individual or small group instruction.

Effective: Spring 2001

ENGL 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Spring 2001

ENGL 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

ENGL 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ENGL 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ENGL 300M

Honors Course in English (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 301M

Honors Seminar in English: Literature Before 1800 (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 2005

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 302M

Honors Seminar in English: Literature After 1800 (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 2005

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 303M

Honors Seminar in English: American Literature & Culture (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 2005

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 304M

Honors Seminar in English: Creative Writing (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 2005

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 310H

Honors Thesis in English (3) Research paper or creative project on a topic approved by the Departmental Honors Committee.

Effective: Fall 1983

Prerequisite: 9 credits of ENGL 300H

ENGL 311

The Canon and Its Critics (3) History and formation of literary canons, and challenges to canon ideology by writers and critics, through readings in English and American literature.

Effective: Fall 2007

Prerequisite: ENGL 015 or ENGL 030H

ENGL 312

Globality and Literature (3) Examines relationships between literature and culture, through the study of major texts in English by writers of various cultures.

Effective: Fall 2007

Prerequisite: ENGL 015 or ENGL 030H

ENGL 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

ENGL 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ENGL 398

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ENGL 399 (IL)

Foreign Study--English (3-6) Advanced studies in English language and/or literature.

Effective: Summer 2005

ENGL 400

Authors, Texts, Contexts (3 per semester, maximum of 6) Styles, cultural milieus, critical perspectives toward particular English-language authors and/or movements they represent, and the idea of authorship. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 401

Studies in Genre (3 per semester, maximum of 6) English-language texts exemplifying particular genres, with attention to critical theories, historical development, rhetorical strategies, and social, cultural, and aesthetic values. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 401W

Creative Writing Theory (3) Theories of art and creativity which inform the making of literary works.

Effective: Fall 2007

Prerequisite: ENGL 200 ; ELISH 201 ELISH 209 ENGL 212 or ENGL 213

ENGL 402

Literature and Society (3 per semester, maximum of 6) Texts confronting social, political, technological, or other issues in the English-speaking world. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 403

Literature and Culture (3 per semester, maximum of 6) Historical, theoretical, and practical issues within cultural studies in relation to English-speaking texts. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 404

Mapping Identity, Difference, and Place (3 per semester, maximum of 6) Ethnicity, gender, class, race with reference to theoretical inquiry into identity, difference, and place in English-language literatures. (Section subtitles may appear in the

Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 405

Taking Shakespeare From Page to Stage (3) Students experience a Shakespeare play as a text to be explicated and as a script to be performed.

Effective: Summer 2003

Prerequisite: permission of program

ENGL 407

History of the English Language (3) Historical and structural study of developments in English sounds, forms, inflections, syntax, derivations, and meanings.

Effective: Spring 1987

Prerequisite: ENGL 100 ; ENGL 202A ENGL 202B ENGL 202C or ENGL 202D

ENGL 409

Composition Theory and Practice for Teachers (3) An overview of the theory and practice of writing for teachers, with emphasis on the writing process.

Effective: Summer 2000

Prerequisite: permission of the program

ENGL 412

Advanced Fiction Writing (3 per semester/maximum of 12) Advanced study of the techniques of fiction writing; regular practice in writing the short story; group discussion of student work.

Effective: Fall 2015

Prerequisite: ENGL 212

ENGL 413

Advanced Poetry Writing (3 per semester/maximum of 12) Advanced study of the techniques of poetic composition; regular practice in writing poetry; group discussion of student work.

Effective: Fall 2015

Prerequisite: ENGL 213

ENGL 414

Biographical Writing (3) Writing of biography and autobiography, character sketches, "profiles," and literary portraits; analysis and interpretations of source materials.

Effective: Spring 1987

Prerequisite: ENGL 200 ENGL 202B ENGL 210 ENGL 212 or ENGL 215

ENGL 415

Advanced Nonfiction Writing (3 per semester/maximum of 12) Advanced study of the principles of nonfiction; substantial practice in writing and submitting magazine articles for publication.

Effective: Fall 2015

Prerequisite: ENGL 212 or ENGL 215

ENGL 416

Science Writing (3 per semester/maximum of 6) Prepares scientists and writers to gather, interpret, and present scientific information to the layman with clarity and accuracy.

Effective: Spring 2001

Prerequisite: COMM 260W ENGL 202C ENGL 210 ENGL 215 or ENGL 421

ENGL 417

The Editorial Process (3) The process of editing from typescript through final proof.

Effective: Summer 2011

Prerequisite: ENGL 202A ENGL 202B ENGL 202C ENGL 202D ENGL 210 ENGL 215

ENGL 418

Advanced Technical Writing and Editing (3 per semester/maximum of 6) Preparing and editing professional papers for subject specialists and for others interested in careers as writers or editors.

Effective: Fall 1987

Prerequisite: ENGL 202A ENGL 202B ENGL 202C ENGL 202D or ENGL 215

ENGL 419

Advanced Business Writing (3) Preparing and editing reports and presentations common to business, industry, and government.

Effective: Fall 1987

Prerequisite: ENGL 202A ENGL 202B ENGL 202C or ENGL 202D

ENGL 420

Writing for the Web (3) Analysis and composition of informative, persuasive, and "creative" Web texts, based on rhetorical principles; no prior Web writing experience required.

Effective: Spring 2002

Prerequisite: ENGL 015 or ENGL 030

ENGL 421

Advanced Expository Writing (3) Develops skill in writing expository essays, with particular attention to style. Intended for liberal arts majors.

Effective: Spring 1987

Prerequisite: ENGL 202A ENGL 202B ENGL 202C or ENGL 202D

ENGL 422

Fiction Workshop (3 per semester/maximum of 6) Practice and criticism in the composition of the short story and the novel.

Effective: Spring 1985

Prerequisite: ENGL 412

ENGL 423

Poetry Writing Workshop (3 per semester/maximum of 6) Extensive practice in writing poetry; consideration of contemporary poetic forms; selected readings.

Effective: Spring 1985

Prerequisite: ENGL 413

ENGL 425

Nonfiction Workshop (3 per semester/maximum of 6) Extensive writing of nonfiction for publication; an introduction to the principles of writing the nonfiction book.

Effective: Spring 1985

Prerequisite: ENGL 415

ENGL 426 (LTNST 426) (US)

Chicana and Chicano Cultural Production: Literature, Film, Music (3) An in-depth study of Chicana/Chicano literature, film, and music from the inception of the Chicano Movement (1965-1975) to the present.

Effective: Spring 2007

Prerequisite: 3 credits in English

ENGL 428 (AAS 428) (US)

Asian American Literatures (3 per semester/maximum of 6) A seminar on the literatures and cultures of Asian America, with attention to forms of geographic, historical, and ethnic diversity.

Effective: Summer 2010

ENGL 429 (CMLIT 429)

New Media and Literature (3) New media literary genres; critical discussion of creative works in digital media.

Effective: Summer 2010

ENGL 430

The American Renaissance (3) Studies in the works and the interrelationships of writers such as Emerson, Hawthorne, Poe, Thoreau, Whitman, Melville, and Dickinson.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 431 (AM ST 475) (US)

Black American Writers (3 per semester, maximum of 6) A particular genre or historical period in the development of Black American literature.

Effective: Fall 2007

Prerequisite: ENGL 015 or ENGL 030

ENGL 432

The American Novel to 1900 (3) Such writers as Hawthorne, Melville, Stowe, Mark Twain, James, Crane, Chopin, and others.

Effective: Spring 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 433

The American Novel: 1900-1945 (3) Such writers as Wharton, Dreiser, Cather, Fitzgerald, Faulkner, Hemingway, Hurston, Wright, and others.

Effective: Spring 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 434 (AM ST 472)

Topics in American Literature (3 per semester) Focused study of a particular genre, theme, or problem in American literature. (May be repeated for credit.)

Effective: Fall 2007

Prerequisite: 6 credits of ENGL ENLSH or LIT

ENGL 435

The American Short Story (3) Development of the short story as a recognized art form, with emphasis on major writers.

Effective: Spring 1984

Prerequisite: ENGL 015 or ENGL 030

ENGL 436

American Fiction Since 1945 (3) Representative fiction by such writers as Barth, Bellow, Ellison, Heller, Mailer, Morrison, Nabokov, Oates, O'Connor, Pynchon, Updike, Walker.

Effective: Spring 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 437

The Poet in America (3) American poets such as Bradstreet, Taylor, Poe, Emerson, Whitman, Dickinson, Frost, Eliot, Stevens, Hughes, Brooks, Moore, Williams, Plath, Rich, Lowell.

Effective: Spring 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 438

American Drama (3) Development from the colonial period to playwrights such as O'Neill, Wilder, Hellman, Miller, Williams, Albee, Shepard, Norman, Wilson, and others.

Effective: Spring 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 439

American Nonfiction Prose (3) Major prose writers such as Franklin, Emerson, Thoreau, Fuller, Henry Adams, Mailer, Baldwin, McCarthy, Dillard, Didion, Angelou, and others.

Effective: Spring 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 440

Studies in Shakespeare (3) Intensive study of a single genre, topic, or critical approach to selected plays.

Effective: Summer 1991

Prerequisite: ENGL 015 or ENGL 030

ENGL 441

Chaucer (3) The principal narrative poems and their background.

Effective: Spring 1984

Prerequisite: ENGL 015 or ENGL 030

ENGL 442

Medieval English Literature (3) Study of major works and genres of medieval English literature, exclusive of Chaucer.

Effective: Spring 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 443

The English Renaissance (3) Such writers as More, Sidney, Spenser, Shakespeare, Donne, Jonson, Bacon, and Marvell.

Effective: Spring 1984

Prerequisite: ENGL 015 or ENGL 030

ENGL 444

Shakespeare (3) Selected tragedies, comedies, and histories.

Effective: Spring 1984

Prerequisite: ENGL 015 or ENGL 030

ENGL 445

Shakespeare's Contemporaries (3) Selected plays by Shakespeare's major predecessors and contemporaries: Kyd, Marlowe, Jonson, Webster, Marston, Middleton, and others.

Effective: Spring 1984

Prerequisite: ENGL 015 or ENGL 030

ENGL 446

Milton (3) Analysis of principal poems and their background.

Effective: Spring 1984

Prerequisite: ENGL 015 or ENGL 030

ENGL 447

The Restoration and the Eighteenth Century (3) The neoclassical age (1660-1776). Such writers as Dryden, Congreve, Swift, Pope, Fielding, Goldsmith, Sheridan, Boswell, Johnson.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 448

The English Novel to Jane Austen (3) Novelists such as Defoe, Richardson, Fielding, Smollett, Sterne, and Austen.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 450

The Romantics (3) Poets such as Blake, Wordsworth, Coleridge, Keats, Shelley, and Byron; also prose by writers such as Hazlitt, Lamb, and DeQuincey.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 451

Literary Modernism in English (3) Survey of literary modernism in English and English translation in a variety of genres, including poetry, fiction, and drama.

Effective: Fall 2015

Prerequisite: ENGL 015 or ENGL 030 or ENGL 137 or CAS 137 and ENGL 138T or CAS 138T

ENGL 452

The Victorians (3) Poets such as Tennyson, Browning, Arnold, and Hopkins; also prose by writers such as Carlyle, Mill, Ruskin, and Arnold.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 453

Victorian Novel (3) Novelists such as the Brontes, Thackeray, Dickens, George Eliot, Meredith, and Hardy.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 454

Modern British and Irish Drama (3) From Wilde and Shaw to the present season.

Effective: Fall 2004

Prerequisite: ENGL 015 or ENGL 030

ENGL 455

Topics in British Literature (3) Focused study of a particular genre, theme, or problem in British literature. (May be repeated for credit.)

Effective: Fall 2001

Prerequisite: 6 credits of ENGL ENLSH or LIT

ENGL 456

British Fiction, 1900-1945 (3) Major writers such as Conrad, Lawrence, Mansfield, Forster, Joyce, Woolf, Waugh, Greene, Bowen, Beckett, and others.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 457

British Fiction Since 1945 (3) Readings in British fiction since World War II.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 458

Twentieth-Century Poetry (3) Poets writing in English such as Yeats, Pound, Eliot, Frost, Auden, Stevens, Plath, Bishop, Brooks, H.D., and others.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 461 (US)

The Vernacular Roots of African American Literature (3) The relationship between oral tradition and literary texts and the double consciousness of African American voice in "print."

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 462 (WMNST 462) (US)

Reading Black, Reading Feminist (3) Female identity and its construction in textual representations of gender, class, color, and cultural difference in English-language literatures.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 463 (US)

African American Autobiography (3) The African American literary quest for identity and its adaptation to Euro-American culture and autobiographies.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 466 (US)

African American Novel I (3) Thematic, structural, and stylistic characteristics of the African American novel from residually oral forms to satiric realism.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 467 (US)

African American Novel II (3) Thematic, stylistic, and structural characteristics of the African American novel from naturalism to modernism and postmodernism.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 468 (US)

African American Poetry (3) African American poetry within the contexts of the black oral tradition and transformed European literary tradition.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 469 (AF AM 469) (US)

Slavery and the Literary Imagination (3) The impact of slavery on the petitions, poetry, slave narratives, autobiographies, and novels of African Americans.

Effective: Fall 2012

Prerequisite: ENGL 015 or ENGL 030

ENGL 470

Rhetorical Theory and Practice (3) Application of certain rhetorical principles to problems in composition. Writing exercise. Designed as preparation for the teaching of composition.

Effective: Spring 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 471

Rhetorical Traditions (3 per semester, maximum of 6) Introduces major traditions of rhetorical inquiry and their

relevance for English studies. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 472

Current Theories of Writing and Reading (3 per semester, maximum of 6) Investigates models of textual production and reception current within English studies. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 473

Rhetorical Approaches to Discourse (3 per semester, maximum of 6) Practices the criticism of written texts from selected rhetorical perspectives. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 474

Issues in Rhetoric and Composition (3 per semester, maximum of 6) Examines selected topics in the field of rhetoric and composition. (Section subtitles may appear in the Schedule of Courses.)

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030

ENGL 477

Teaching Children's Literature (3) Teaching Children's Literature in light of recent literary pedagogy, the history of childhood, and critical approaches to Children's Literature.

Effective: Fall 2007

Prerequisite: ENGL 202

ENGL 479

Business or Technical Writing Practicum (1-3) Practical experience applying business or technical writing principles, working with advanced business, science, or engineering students on classroom projects.

Effective: Fall 2007

Prerequisite: Prerequisite or concurrent: ENGL 418 or ENGL 419

ENGL 480

Communication Design for Writers (3) This course explores visual design, non-verbal communication, and software packages used in professional settings to most effectively present written communications.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030 ; ENGL 202A ENGL 202B ENGL 202C or ENGL 202D ; 7th semester standing or higher

ENGL 481

Literary Theory: Historical Perspectives (3) Selected topics in the history of literary criticism and theory within the English-language tradition.

Effective: Summer 1994

Prerequisite: ENGL 015 or ENGL 030

ENGL 482

Contemporary Literary Theory and Practice (3 per semester, maximum of 6) Contemporary literary theories and their implication for critical practice as applied to British, American, and other English-language literary works.

Effective: Summer 1992

Prerequisite: ENGL 015 OR ENGL 030

ENGL 482W

Contemporary Literary and Cultural Theory (3) Contemporary literary and cultural theories and their implication for critical practice as applied to a variety of texts, e.g. literary, linguistic, visual, multimedia, and/or popular.

Effective: Fall 2007

Prerequisite: ENGL 015 or ENGL 030H ; ENGL 200

ENGL 483

Problems in Critical Theory and Practice (3) Intensive study of one or more recent theoretical approaches as applied to British, American, and other English-language literary works.

Effective: Summer 1994

Prerequisite: ENGL 015 or ENGL 030

ENGL 485

Australian and New Zealand Literature and Culture (3) Questions of nationality, identity, gender, race, class, colonialism, and postcolonialism in these literatures.

Effective: Summer 1995

Prerequisite: ENGL 015 or ENGL 030

ENGL 486 (IL)

The World Novel in English (3) Studies in the novel, written in English, by writers outside of the United States and Great Britain.

Effective: Fall 2007

Prerequisite: ENGL 002 ; ENGL 015 or ENGL 030

ENGL 487W

Senior Seminar (3) Issues, themes, periods, critical theories, etc., that invite students to use prior English studies, limited to seniors majoring in English.

Effective: Summer 1997

Prerequisite: six credits of 400-level courses in English

ENGL 488 (CMLIT 488) (IL)

Modern Continental Drama (3) From Ibsen to the drama of today: Strindberg, Chekhov, Hauptmann, Pirandello, Ionesco, Beckett, Genet, and others.

Effective: Spring 2006

Prerequisite: ENGL 015 or ENGL 030

ENGL 489 (WMNST 489)

British Women Writers (3) A study of selected British women writers.

Effective: Spring 2008

Prerequisite: 6 credits of ENGL

ENGL 490 (WMNST 490) (US;IL)

Women Writers and Their Worlds (3) American and British literature written from the perspective of women.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 491

The Capstone Course in Professional Writing (3) This culminating course for Professional Writing majors concentrates on reflective analyses, design, and presentation of documents in the development of professional portfolios.

Effective: Summer 2004

Prerequisite: ENGL 015 or ENGL 030 ; ENGL 202A ENGL 202B ENGL 202C or ENGL 202D ;seventh-semester standing or higher; enrollment in Professional Writing major

ENGL 492 (AM ST 476, WMNST 491)

American Women Writers (3) A study of selected American women writers.

Effective: Spring 2008

Prerequisite: 6 credits of ENGL

ENGL 493 (AM ST 493)

The Folktale in American Literature (3) A survey of the literary uses of the folktale and legendary materials, with particular concentration on the literature of America.

Effective: Spring 1986

Prerequisite: ENGL 015 or ENGL 030

ENGL 494

Senior Thesis in English (1-6) Senior English (ELISH) majors write a thesis arranged with in-charge person and submit it to a faculty committee for appraisal.

Effective: Fall 2007

Prerequisite: seventh-semester standing

ENGL 494H

Senior Thesis in English (1-6) Senior English (ELISH) majors write a thesis arranged with in-charge person and submit it to a faculty committee for appraisal.

Effective: Fall 2007

Prerequisite: seventh-semester standing

ENGL 495

Internship (3-12) Supervised practicum in fields appropriate to the English major.

Effective: Spring 2001

ENGL 496

Independent Studies (1-18) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

ENGL 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

ENGL 498

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ENGL 499 (IL)

Foreign Study--English (3-6) Studies abroad in English language and/or literature.

Effective: Summer 2005

ENVST 424 (ENGL 424)

Creative Writing and the Natural World (3) Creative writing workshop focused on the environment and related issues.

Effective: Summer 2011

Prerequisite: ENGL 050 or ENVST 100

FR 083S (GH;IL)

First-Year Seminar in French (3) Critical approaches to the dimensions and directions in French/Francophone literatures and cultures.

Effective: Summer 2005

FR 111

Elementary French (6) Acquisition of basic skills in the active use of French: listening, speaking, reading, and writing.
Effective: Fall 1983

FR 121G

Fundamentals of Reading French (3) Instruction in fundamental skills required for reading expository French prose, primarily for research purposes. (This course may not be used to satisfy any baccalaureate degree requirements. No graduate credit is given for this course.)

Effective: Spring 2001

Prerequisite: seventh-semester standing

FR 122G

Practice in Reading French (3) Development and reinforcement of basic reading skills, with emphasis on the individual student's area of research. (This course may not be used to satisfy any baccalaureate degree requirements. No graduate credit is given for this course.)

Effective: Fall 1984

Prerequisite: FR 121G

FR 137 (GH;IL)

Paris: Anatomy of a City (3) Survey of the cultural, artistic, literary, and social life of the city of Paris from Gallo-Roman times to the present.

Effective: Summer 2005

FR 138 (GH)

French Culture Through Film (3) Introduction to French culture through film by French and francophone directors examining gender, ethnicity, and global issues. Taught in English.

Effective: Spring 2002

FR 139 (GH;IL)

France and the French-speaking World (3) An introduction to the culture of France and its impact on the world.

Effective: Summer 2005

FR 142 (GH;IL)

French Fiction, Drama, and Film (In English) (3) An introduction, in English, to French and francophone literature and cultural history through film, theater, and literature.

Effective: Spring 2016

FR 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

FR 199 (IL)

Foreign Study--French (1-12) Intensive postintermediate grammar review, with emphasis on oral skills and vocabulary building.

Effective: Summer 2005

Prerequisite: FR 003

FR 202 (IL)

Grammar and Composition (3) Grammar review and writing of short essays.

Effective: Spring 2006

Prerequisite: FR 003

FR 270 (WMNST 270)

Race and Gender in Literature Translated from French (3) A critical presentation, taught in English, of changing ideas and values on race and gender in French and Francophone literatures.

Effective: Spring 2005

FR 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

FR 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1982

FR 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1982

FR 331 (IL)

French Culture and Civilization I (3) French history and culture from the Middle Ages until the French Revolution.

Effective: Summer 2006

Prerequisite: FR 201 FR 202

FR 332 (IL)

French Culture and Civilization II (3) French history and culture from the French Revolution through the Third Republic.

Effective: Summer 2006

Prerequisite: FR 201 FR 202

FR 351 (IL)

Introduction to French Literature I (3) Introduction to close textual reading and analysis of selected works of French literature from the middle ages to 1789.

Effective: Summer 2013

Prerequisite: FR 201 FR 202

FR 352 (IL)

Introduction to French Literature II (3) Introduction to close textual reading and analysis of selected works of French Literature from 1789 to the present.

Effective: Summer 2013

Prerequisite: FR 201 FR 202

FR 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

FR 399 (IL)

Foreign Study--French (3-12) Advanced training in the French language skills.

Effective: Summer 2005

Prerequisite: FR 201 FR 202

FR 402Y (IL)

Advanced Grammar and Writing (3) Advanced study of the structure of the French language. Intensive essay writing.

Effective: Spring 2006

Prerequisite: FR 201 FR 202

FR 409 (IL)

Commercial and Technical Translation (3) Translation from English to French of commercial and technical materials; vocabulary building; writing of abstracts and summaries.

Effective: Spring 2006

Prerequisite: FR 402Y

FR 410 (IL)

French Press (3) Extensive readings of selected french daily and weekly newspapers and magazines, along with newscast viewings.

Effective: Spring 2007

Prerequisite: FR 331 or FR 332

FR 417 (IL)

French Phonology (3) A formal study of the sound pattern of French.

Effective: Spring 2007

Prerequisite: FR 201 FR 202

FR 418 (IL)

French Syntax (3) A formal theory of word order and related issues in French grammar.

Effective: Spring 2006

Prerequisite: FR 201 and FR 202

FR 426Y (IL)

French Literature of the Renaissance (3) Survey of key texts from sixteenth century France, with attention to historical and philosophical currents of French social thought.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 430 (IL)

Contemporary France (3) Study of contemporary French society, politics, and culture from 1870 to the present.

Effective: Summer 2013

FR 436 (IL)

French and Francophone Theater (3) French Theater: From "classical unities: to Contemporary Performances.

Effective: Fall 2015

Prerequisite: FR 351 or FR 352

FR 440 (IL)

Teaching of Romance Languages (3) Theories of second language acquisition. Current classroom practices in the teaching of Romance languages.

Effective: Spring 2006

Prerequisite: 15 credits beyond the elementary level

FR 445Y (IL)

Self and Society in Eighteenth-Century France (3) The changing relationship of the individual to society in pre-Revolutionary France will be explored in texts by major writers.

Effective: Spring 2006

Prerequisite: FR 351 . Prerequisite or concurrent: FR 352

FR 452Y (IL)

Nineteenth-Century French Literature (3) Selected readings in romanticism, realism, and symbolism, including Balzac, Stendhal, Sand, Baudelaire, and others, with emphasis on cultural issues.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 453Y (IL)

La Belle Epoque: Politics, Society, and Culture in France, 1880-1914 (3) Interdisciplinary perspectives on the politics, society, and culture of France, 1880-1914.

Effective: Summer 2013

Prerequisite: FR 351 or FR 352

FR 458 (IL)

African Literature of French Expression (3) Genesis of Franco-African literature in the 1930s; phases of the negritude movement; colonial and national literature.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 460 (IL)

Contemporary French Literature (3) Major authors and movements in French novel, drama, and poetry from Proust to the present.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 470 (IL)

Race and Gender Issues in Literatures in French (3) A critical presentation, taught in French, of changing ideas and values on race and gender in French and Francophone literatures.

Effective: Summer 2005

Prerequisite: FR 351 or FR 352

FR 487 (IL)

Topics in French Film History and Theory I: 1895-1945 (3) Provide background needed to understand the broad outlines of French film history and theory in their first fifty years (1895-1945).

Effective: Spring 2006

Prerequisite: FR 351 and FR 352 or COMM 250

FR 488 (IL)

Topics in French Film History and Theory II: 1945-2002 (3) Provide background needed to understand the broad outlines of French film history and theory in their second half-century (1945-2002).

Effective: Spring 2006

Prerequisite: FR 351 and FR 352 or COMM 250

FR 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

FR 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

FR 495

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1998

Prerequisite: prior approval of proposed assignment by instructor

FR 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

FR 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

FR 499 (IL)

Foreign Study--French (3-12) Advanced studies in French language and literature.

Effective: Summer 2005

Prerequisite: FR 201 FR 202

GEOG 122 (GH;US)

The American Scene (3) Historical perspectives on the social and cultural forces associated with the production of distinctive American landscapes.

Effective: Spring 2007

GER 083S (GH;US;IL)

First-Year Seminar in German (3) Germany's cultural past and present.

Effective: Summer 2005

GER 099 (IL)

Foreign Study--German (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

GER 100 (GH;IL)

German Culture and Civilization (3) Culture and civilization of the German people from the Germanic migrations to the Nazi period. Conducted in English.

Effective: Summer 2005

GER 143 (RUS 143) (GH;IL)

The Culture of Stalinism and Nazism (3) The culture of Stalinist Russia and Nazi Germany in comparative perspective.

Effective: Summer 2005

GER 157 (GH;US)

Pennsylvania Germans: The Culture of the Sectarians (3) Survey of the religious background, beliefs, social life, customs, education, and culture of the Pennsylvania German sectarians, especially the Amish. Conducted in English.

Effective: Summer 2005

GER 175 (GH;IL)

Germanic Heroic and Medieval Literature in English Translation (3) Germanic heroic and medieval courtly literature from 800 to 1350 focusing on the prevailing cultural, social, and legal conditions.

Effective: Spring 2006

GER 190 (GH;IL)

Twentieth-Century German Literature in English Translation (3) Works of such writers as Boll, Brecht, Durrenmatt, Frisch, Grass, Hesse, Kafka, Mann, Rilke, Weiss, and Wolf.

Effective: Spring 2006

GER 195 (GH;IL)

Modern German Drama and Theatre in English Translation (3) Plays and their stage realization by writers such as Brecht, Durrenmatt, Handke, Hauptmann, Kaiser, Schnitzler, Wedekind, and Weiss.

Effective: Spring 2006

GER 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1995

GER 200 (GH;IL)

Contemporary German Culture (3) Germany since WWI, its politics, economics, society, arts, and educational system in the international context; conducted in English.

Effective: Summer 2005

GER 208Y (IL)

Business German (4) Intermediate Business German.

Effective: Fall 2006

Prerequisite: GER 003 or GER 008

GER 245 (GH)

The Vikings (3) Focus on the history of the Vikings from 800 to 1400 as conveyed to us in mythology, literature, and archaeology. Conducted in English.

Effective: Spring 2005

GER 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

GER 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

GER 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1985

GER 302W

Intermediate Composition and Grammar (3) Continuation of oral and written practice in German with extensive work in composition.

Effective: Spring 2012

Prerequisite: GER 201 or GER 208

GER 310 (IL)

Introduction to the Study of German Literature (3) History, methods, and the terminology of literary interpretation and analysis in German.

Effective: Spring 2012

Prerequisite: GER 301 or GER 302W

GER 344 (IL)

Intermediate German Culture (3) An overview of German culture from the Middle Ages to the present. Conducted in German.

Effective: Spring 2012

Prerequisite: GER 301 or GER 302W

GER 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

GER 399 (IL)

Foreign Study--German (3-12) Advanced studies in German language and/or literature.

Effective: Summer 2005

Prerequisite: GER 201

GER 412 (IL)

Contrastive Analysis of Modern German and English (3) Structural comparison of the German and English grammatical systems: morphology, syntax, phonology.

Effective: Spring 2006

Prerequisite: or concurrent: GER 401

GER 420 (IL)

Genre (3-9) Special studies in a particular literary genre in German literature, such as lyrical poetry, drama, or narrative prose.

Effective: Spring 2006

Prerequisite: GER 310 GER 401

GER 430 (IL)

History of the German Language (3) Development of German from its earliest stages, including historical and cultural aspects.

Effective: Fall 2007

Prerequisite: or concurrent: GER 401Y

GER 431 (IL)

History of German Literature and Culture I (3) Significant works of German literature before the mid-eighteenth century considered in their cultural context.

Effective: Spring 2006

Prerequisite: GER 310 . Prerequisite or concurrent: GER 401

GER 432 (IL)

History of German Literature and Culture II (3) Significant works of German literature from the mid-eighteenth century to the present considered in their cultural context.

Effective: Spring 2006

Prerequisite: GER 310 . Prerequisite or concurrent: GER 401

GER 440 (IL)

Seminar in German Culture (3-6) Seminar devoted to a special topic in the field of German culture and civilization.

Effective: Spring 2006

Prerequisite: or concurrent: GER 401

GER 472 (IL)

Romanticism (3) A study of both early and late romanticism, including such writers as Novalis, the Schlegels, E.T.A. Hoffmann, and Heine.

Effective: Spring 2006

Prerequisite: or concurrent: GER 431 or GER 432

GER 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

GER 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

GER 495

Internship (3-9) Supervised off-campus, non-group instruction including individual field experiences, practicums, or internships. Written and oral critique of activity required.

Effective: Summer 1981

Prerequisite: prior approval of proposed assignment by instructor

GER 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

GER 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1985

GER 499 (IL)

Foreign Study--German (3-12) Advanced studies in German language, literature, and culture.

Effective: Summer 2005

Prerequisite: any 300-level course in German

GLIS 101 (GS;IL)

Globalization (3) This course provides a broad introduction to the topic of global studies.

Effective: Summer 2015

GREEK 099 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

GREEK 101

Introductory Ancient Greek (4) Fundamentals of classical Greek grammar, syntax, and vocabulary.

Effective: Fall 2001

GREEK 102

Intermediate Ancient Greek (4) Intermediate study of classical Greek grammar, syntax, and vocabulary.

Effective: Fall 2001

Prerequisite: GREEK 101

GREEK 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1995

GREEK 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

GREEK 296

Independent Studies (1-18) Creative projects, including research and design, that are supervised on an individual basis and that fall outside the scope of formal courses.

Effective: Spring 2001

GREEK 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Fall 1983

GREEK 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

GREEK 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

GREEK 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Spring 2001

GREEK 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

GREEK 420

Greek Prose Authors (3-6) Readings in representative authors.

Effective: Summer 2011

GREEK 425

Greek Historians (3-6) Translation and study of one or more of the ancient Greek historians.

Effective: Summer 2011

Prerequisite: GREEK 102

GREEK 430

Greek Poetry (3-6) Translation and analysis of selected readings in Greek poetry.

Effective: Summer 2011

Prerequisite: GREEK 102

GREEK 440

Greek Drama (3-6) Translation and study of a selected play.

Effective: Summer 2011

Prerequisite: GREEK 102

GREEK 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group

basis.

Effective: Summer 1994

GREEK 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

GREEK 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

GREEK 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

GREEK 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 010 (J ST 010) (GH;IL)

Jewish Civilization (3) Life of the Jewish people from Biblical times, emphasizing cultural, religious, and institutional developments.

Effective: Summer 2005

HEBR 097

Special Topics (1-6) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Fall 1992

HEBR 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 151 (CAMS 151, J ST 151)

Introductory Biblical Hebrew (3) Fundamentals of Biblical Hebrew grammar, syntax, and vocabulary.

Effective: Summer 2005

HEBR 152 (CAMS 152, J ST 152)

Intermediate Biblical Hebrew (3) Intermediate study of Biblical Hebrew grammar, syntax, and vocabulary.

Effective: Summer 2005

Prerequisite: HEBR 151

HEBR 197

Special Topics (1-6) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Fall 1992

HEBR 199 (IL)

Foreign Study--Basic Hebrew (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

HEBR 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Summer 1986

HEBR 297

Special Topics (1-6) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Fall 1983

HEBR 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

HEBR 397

Special Topics (1-6) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be

taught in one year or semester.

Effective: Fall 1992

HEBR 399 (IL)

Foreign Study--Intermediate Hebrew (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 401

Advanced Hebrew--Conversation Emphasis (3 per semester, maximum of 6) Development of oral proficiency through discussions focusing on issues in contemporary Jewish culture.

Effective: Summer 2011

HEBR 402

Advanced Hebrew--Reading Emphasis (3 per semester, maximum of 6) Readings in representative works of traditional and modern literature; practice in composition; study of aspects of Jewish culture.

Effective: Summer 2011

HEBR 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

HEBR 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

HEBR 496

Independent Studies (1-18) Creative projects including research and design which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1982

HEBR 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Fall 1983

HEBR 498

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Fall 1992

HEBR 499 (IL)

Foreign Study--Advanced Hebrew (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HIST 001 (GH;IL)

The Western Heritage I (3) A survey of the Western heritage from the ancient Mediterranean world to the dawn of modern Europe.

Effective: Spring 2006

HIST 001T (GH;IL)

The Western Heritage I (3) A survey of the Western heritage from the ancient Mediterranean world to the dawn of modern Europe.

Effective: Spring 2006

HIST 002 (GH;IL)

The Western Heritage II (3) A survey of the Western heritage from the dawn of modern Europe in the seventeenth century to the present.

Effective: Spring 2006

HIST 003 (GH;US)

The American Nation: Historical Perspectives (3) American history from discovery to the present, focusing on both racial, ethnic, and religious differences and shared traditions and ideals.

Effective: Fall 2014

HIST 010 (GH;IL)

World History I (3) Human origins; early civilizations; major political and intellectual developments on all continents; cultural interrelationships to 1500.

Effective: Summer 2005

HIST 011 (GH;IL)

World History II (3) Social, economic, and political evolution of societies and cultures from 1500 to the present.

Effective: Summer 2005

HIST 012 (GH;US)

History of Pennsylvania (3) Chronological and topical survey, emphasizing immigration of diverse ethnic groups and religious, political, economic, and social developments, including industrialization and urbanization.

Effective: Spring 2006

HIST 020 (GH;US)

American Civilization to 1877 (3) An historical survey of the American experience from its colonial beginnings through the Civil War and Reconstruction.
Effective: Spring 2006

HIST 020Y (GH;US)

American Civilization to 1877 (3) An historical survey of the American experience from its colonial beginnings through the Civil War and Reconstruction.
Effective: Spring 2006

HIST 021 (GH;US)

American Civilization Since 1877 (3) An historical survey of the American experience from the emergence of urban-industrial society in the late nineteenth century to the present.
Effective: Spring 2006

HIST 021Y (GH;US)

American Civilization Since 1877 (3) An historical survey of the American experience from the emergence of urban-industrial society in the late nineteenth century to the present.
Effective: Spring 2006

HIST 083S (GH)

First-Year Seminar in History (3) Critical approaches to the dimensions and directions in History.
Effective: Summer 1999

HIST 100 (CAMS 100) (GH;IL)

Ancient Greece (3) Greek world from the earliest Aegean cultures to the death of Alexander the Great and the beginnings of Hellenistic civilization.
Effective: Spring 2006

HIST 101 (CAMS 101) (GH;IL)

The Roman Republic and Empire (3) History of the Roman Republic and Empire from the origins of Rome to the disintegration of the Empire.
Effective: Spring 2006

HIST 102 (CAMS 102, J ST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.
Effective: Summer 2005

HIST 103 (GH;IL)

The History of Madness, Mental Illness, and Psychiatry (3) This course will examine the ideas that have shaped European and American perceptions of madness, insanity, and mental illness.
Effective: Summer 2005

HIST 104 (CAMS 104) (GH)

Ancient Egypt (3) The history and archaeology of ancient Egypt from the dawn of history to the Greco-Roman period.
Effective: Summer 2002

HIST 105 (GH;IL)

The Byzantine Empire (3) Development of Byzantine civilization from the decline of the Roman Empire to the fall of Constantinople.
Effective: Spring 2006

HIST 107 (MEDVL 107) (GH;IL)

Medieval Europe (3) Rise and development of the civilization of medieval Europe from the decline of Rome to 1500.
Effective: Spring 2006

HIST 108 (GH;IL)

The Crusades: Holy War in the Middle Ages (3) The social and political history of medieval religious warfare in Europe and in the Middle East.
Effective: Spring 2006

HIST 109 (GH;US)

Introduction to U.S. Environmental History (3) An introduction to the changing relationships between human beings and the natural world in American history.
Effective: Fall 2016

HIST 110 (GH;IL)

Nature and History (3) A broad introduction to the history of human relationships with nature throughout the world.
Effective: Summer 2005

HIST 112 (US)

Introduction to U.S. Environmental History (3) An introduction to the changing relationships between human beings and the natural world in American history.
Effective: Fall 2016

HIST 117 (WMNST 117) (GH;US;IL)

Women in Modern History (3) Modernization and women: changing images and roles since mid-eighteenth century in the family, workshop, politics, society; cross-cultural comparisons.
Effective: Summer 2005

HIST 118 (J ST 118) (US;IL)

Modern Jewish History (3) Jewish social and political history from 1492 to the present.
Effective: Fall 2015

HIST 119 (GH;IL)

Gender and History (3) Survey of the development of gender roles in Western societies from the prehistoric era to the early modern period.
Effective: Spring 2008

HIST 121 (J ST 121) (GH;IL)

History of the Holocaust 1933-1945 (3) Historical analysis of holocaust themes.
Effective: Summer 2005

HIST 122 (GH)

History of Science I (3) A history of science and culture from pre-history until the Scientific Revolution.
Effective: Fall 2014

HIST 123 (GH)

History of Science II (3) A history of science and culture from the scientific revolution to the present.
Effective: Fall 2014

HIST 130 (GH;US)

Introduction to the Civil War Era, 1848 through 1877 (3) Survey of causes and consequences of American Civil War, end of Mexican War in 1848 through end of Reconstruction, 1877.
Effective: Spring 2010

HIST 141 (GH;IL)

Medieval and Modern Russia (3) Introductory survey, including political, social, economic, and cultural development of Kievan, Muscovite, and Imperial Russia.
Effective: Spring 2006

HIST 143 (J ST 143) (GH;IL)

History of Fascism and Nazism (3) The study of right-wing totalitarianism in the twentieth century, with special emphasis on Fascist Italy and Nazi Germany.
Effective: Fall 2015

HIST 144 (GH;US;IL)

The World at War: 1939-1945 (3) In-depth study of the origins and conduct of World War II. Political and economic aspects as well as military.
Effective: Spring 2006

HIST 150 (GH;US)

America in the 1960s: An Introduction (3) An introduction to the history of the United States in the 1960s.
Effective: Summer 2015

HIST 152 (AF AM 152) (GH;US;IL)

African American History (3) African roots; colonial and revolutionary experiences; slavery and abolitionism; civil war and reconstruction; accommodation and protest; the new militancy.
Effective: Fall 2013

HIST 153 (GH;US)

The Indian in North America (3) A survey of the American Indian from prehistory to the present.
Effective: Summer 2005

HIST 153Y (GH;US)

The Indian in North America (3) A survey of the American Indian from prehistory to the present.
Effective: Summer 2005

HIST 154 (GH;US)

History of Welfare and Poverty in the United States (3) History of care of the impoverished (emphasis on gender, race, nationality, age of poor, and welfare givers), 18th century to present.
Effective: Summer 2005

HIST 158 (US;IL)

History of American Immigration (3) The waves of migration to America and an analysis of the resulting minority groups, their reception, assimilation, and persisting identity.
Effective: Spring 2006

HIST 160 (US)

American Naval History (3) Introduction to the role of the United States Navy in the defense, diplomacy, commerce, and scientific development of the nation.
Effective: Spring 2006

HIST 161 (US)

The Battle of Gettysburg in American Historical Memory (3) Examines factors shaping understanding of the Civil War's decisive battle and its meanings as a national symbol.
Effective: Spring 2006

HIST 165 (ARAB 165, RL ST 165) (IL)

Introduction to Islamic Civilization (3) Islamic history, culture, and religious life c.600-1500 C.E.
Effective: Spring 2006

HIST 171 (ASIA 171) (GH;IL)

Introduction to South Asian History 2: Early Modern to Contemporary (3) An introduction to South Asian history from early modern to contemporary times.
Effective: Spring 2015

HIST 172 (ASIA 172, JAPNS 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.
Effective: Fall 2016

HIST 174 (ASIA 174) (GH;IL)

The History of Traditional East Asia (3) Comparative cultural, institutional, and social history of traditional China and Japan to their contact with the industrialized West.
Effective: Fall 2016

HIST 175 (ASIA 175) (GH;IL)

The History of Modern East Asia (3) Survey of modern East Asian history and civilizations, from the nineteenth century to roughly the present day.
Effective: Fall 2016

HIST 176 (GH;IL)

Survey of Indian History (3) Survey of cultural, institutional, and political history from ancient times to the present.
Effective: Summer 2005

HIST 178 (GH;IL)

Latin-American History to 1820 (3) Conquest of the New World, development of colonial institutions, impact on native cultures, and origins of independence movements.
Effective: Summer 2005

HIST 179 (GH;IL)

Latin-American History Since 1820 (3) Origin, political growth, international relations, and economic status of the Latin-American republics, with emphasis upon present-day conditions.
Effective: Summer 2005

HIST 180 (CAMS 180) (GH;IL)

Ancient Warfare (3) Historical survey of the evolution of warfare in the ancient Mediterranean region from prehistoric times to the Later Roman Empire.
Effective: Summer 2006

HIST 181 (J ST 181) (GH;IL)

Introduction to the Middle East (3) Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918.
Effective: Fall 2015

HIST 182 (ASIA 182) (GH;IL)

Asian Trade: Economy, Industrialization and Capitalism in Asia (3) An historical overview of economy, industrialization, globalization and capitalism in Asia from the 16th century to present.
Effective: Summer 2014

HIST 183 (ASIA 183) (GH;IL)

Gender, Family, and Society in East Asia (3) Investigates the history of gender, family, love, and sex in East Asia.
Effective: Summer 2012

HIST 184 (ASIA 184) (GH;IL)

Society and Culture in the Pacific War (3) Examines the role of society and culture in the Pacific War's causes, contexts, realities, and aftermath.
Effective: Summer 2012

HIST 185 (ASIA 185) (GH;IL)

Asian Pop: The History of Popular Culture in Asia (3) A history of popular culture from the early modern period to the present.
Effective: Summer 2014

HIST 189 (ASIA 189) (GH;IL)

Illicit Asia: An Alternative Introduction to Asia (3) A historical introduction to unlawful, illegitimate and forbidden ideas, goods people and places in modern Asia.
Effective: Summer 2014

HIST 190 (J ST 190, RL ST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.
Effective: Summer 2015

HIST 191 (AFR 191) (GH;IL)

Early African History (3) Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750.
Effective: Fall 2012

HIST 192 (AFR 192) (GH;IL)

Modern African History (3) Impact of the slave trade, expansion of Islam, colonial conquest, social and cultural transformations, resistance, nationalism, and independence.
Effective: Fall 2012

HIST 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1995

HIST 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HIST 200 (US)

American Local History (3 per semester/maximum of 6) Topics in American local history relating local to national developments and studying the historical method by using primary source material.

Effective: Spring 2006

Prerequisite: HIST 020 or HIST 021

HIST 203Y (GH;US;IL)

History of Monsters, Aliens & The Supernatural (3) This course explores the history of the preoccupation with monsters, aliens, and the supernatural.

Effective: Summer 2015

HIST 210 (AF AM 210) (GH;US)

Freedom's First Generation: African American Life and Work, 1865 to World War II (3) The course will explore the context and events that shaped African American life over the period 1896-1932.

Effective: Spring 2015

Prerequisite: AF AM 100 three credits of American history or permission of the instructor

HIST 211 (AF AM 211) (GH;US;IL)

Slavery and Freedom in the Black Atlantic (3) The course will explore the history and role of African and African-descent people in Africa, the Americas, and Europe.

Effective: Spring 2015

Prerequisite: AF AM 100 or HIST 003 or HIST 020 or HIST 021 or HIST 152

HIST 235 (J ST 235, RL ST 235) (US;IL)

The Church and the Jews (3) Examination of the relationship between Western church and the Jews from the First Century to Enlightenment.

Effective: Spring 2006

HIST 250 (AF AM 250) (GH;IL)

Introduction to the Modern Caribbean (3) A survey course which explores the historical evolution and emergence of the modern Caribbean.

Effective: Fall 2012

HIST 261Y (J ST 261Y) (GH;US;IL)

Ghetto: From Venice to Detroit (3) This course explores why certain groups have been segregated in cities around the world in the last 500 years.

Effective: Spring 2015

HIST 266Y (WMNST 266Y) (GH;US)

Sex and Violence in Nineteenth-Century America (3) Historical Overview of Sex and Violence in the Nineteenth-Century United States.

Effective: Spring 2015

HIST 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

HIST 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Spring 1986

HIST 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1986

HIST 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HIST 300B

American Historiography (3) Readings, group discussions, and oral and written reports on great historians, philosophy of history, and conflicting interpretations in American history.

Effective: Fall 1983

Prerequisite: third-semester standing 6 credits in history with a grade of A or B an all-University average of B

HIST 300C

Independent Study (3) Readings and oral and written reports in areas to be arranged with the chairman of the Honors Committee.

Effective: Spring 2012

Prerequisite: HIST 300B

HIST 300D

Honors Thesis (3) Research paper in an area arranged with the chairman of the Honors Committee.

Effective: Spring 2012

Prerequisite: HIST 300B HIST 300C

HIST 302W

Undergraduate Seminar (3) Thematic or topical investigation; emphasis on historical criticism and analysis.

Effective: Spring 2014

Prerequisite: 4th semester standing

HIST 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

HIST 399 (IL)

Foreign Study--History (1-12) Study in selected foreign countries of various periods and topics in history.

Effective: Summer 2005

HIST 401 (J ST 401) (IL)

Ancient Technologies and Socio-cultural History in the Ancient Levant (3) Social and intellectual development in the Ancient Levant as they affected and were affected by technological development.

Effective: Spring 2006

Prerequisite: RL ST 110

HIST 402 (IL)

The Rise of the Greek Polis (3) Development of the Greek city-state from Homeric times to the fifth century B.C.; special references to Athenian society.

Effective: Spring 2006

Prerequisite: HIST 100

HIST 403 (IL)

Alexander the Great and the Hellenistic World (3) The career of Alexander, his impact on his own time, and the Hellenistic legacy.

Effective: Spring 2006

Prerequisite: HIST 100

HIST 405Y (IL)

The Roman Empire (3) The political and social history of the Roman empire; economic institutions and religious groups which influenced Roman administration.

Effective: Spring 2006

Prerequisite: HIST 001 HIST 101 or 3 credits in classical studies

HIST 407 (IL)

Early Medieval Society (3) Rise of European nations and evolution of their social and political institutions from the time of Constantine to the Crusades.

Effective: Spring 2006

Prerequisite: HIST 107

HIST 408 (IL)

Church and State in the High Middle Ages (3) European political, institutional, and social history in light of church-state tensions from the Crusades to the Renaissance.

Effective: Spring 2006

Prerequisite: HIST 107

HIST 409Y (J ST 409Y, RL ST 407Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.

Effective: Fall 2015

HIST 410 (J ST 410, RL ST 410) (US;IL)

Jews in the Medieval World (3) Trends in medieval Jewish society under Islam and Western Christendom.

Effective: Spring 2006

HIST 411 (MEDVL 411) (IL)

Medieval Britain (3) Political, cultural, and economic history of Britain from circa 400 to 1485 with an emphasis on the kingdom of England.

Effective: Spring 2006

Prerequisite: 6 credits in European history or medieval studies

HIST 412 (IL)

Intellectual History of the Middle Ages (3) Intensive study of selected topics, such as philosophy, mysticism, heresy, the church, literary and artistic expression, and science.

Effective: Spring 2006

Prerequisite: HIST 107

HIST 413 (MEDVL 413) (IL)

Medieval Celtic Studies (3) Celtic civilization from antiquity to the end of the middle ages.

Effective: Spring 2006

Prerequisite: 3 credits in medieval studies or in language literature or European history of the medieval period

HIST 414 (IL)

Renaissance and Reformation (3) The transformation of consciousness from medieval to modern times, with special emphasis on Renaissance Italy and Reformation Germany.

Effective: Spring 2006

Prerequisite: HIST 001

HIST 415 (US;IL)

Race, Gender, and Politics in the United States and South Africa (3) This thematic course will compare key issues, figures, and events in the historical development of the United States and South Africa.

Effective: Spring 2013

Prerequisite: AF AM 100 AF AM 102 AFR 110 AFR 192 or HIST 152

HIST 416 (J ST 416)

Zionism (3) History of Zionist thought and politics to the foundation of Israel 1948.

Effective: Fall 2015

HIST 417 (IL)

The Age of Absolutism (3) Seventeenth- and eighteenth-century royal absolutism in France, Prussia, and Austria; concurrent economic, social, and scientific developments; the Enlightenment.

Effective: Spring 2006

Prerequisite: HIST 001

HIST 418 (IL)

The French Revolution and the Napoleonic Era (3) Development of revolutionary France and the First French Empire and their impact on Europe from 1789 to the Vienna settlement.

Effective: Spring 2006

Prerequisite: HIST 002

HIST 418W (IL)

The French Revolution and the Napoleonic Era (3) Developments of revolutionary France and the First French Empire and their impact on Europe from 1789 to the Vienna settlement.

Effective: Spring 2008

Prerequisite: HIST 002

HIST 419 (US;IL)

The History of Feminist Thought (3) A critical analysis of European and United States feminist thought from the renaissance to the present.

Effective: Spring 2013

Prerequisite: HIST 116 HIST 117 WMNST 100 or WMNST 106

HIST 420 (IL)

Recent European History (3) Impact of two World Wars in twentieth century; social conflict and economic catastrophe; political radicalism; post-1945 recovery and cooperation.

Effective: Spring 2006

Prerequisite: 3 credits in European history

HIST 421 (WMNST 421) (IL)

The History of European Women (3) European women's lives from the Middle Ages to the present.

Effective: Spring 2013

Prerequisite: HIST 116 HIST 117 WMNST 100 or WMNST 106

HIST 422 (RL ST 422) (GH;IL)

Religion and American Culture (3 per semester/maximum of 6) Selected topics, problems, or historical movements in American religion. Relation between religion and American culture.

Effective: Spring 2015

Prerequisite: 3 credits in either history or religious studies

HIST 423 (RL ST 423) (GH;IL)

Orthodox Christianity: History and Interpretations (3) Examines Orthodox Christianity from origins to present using critical historical analysis of primary and secondary sources.

Effective: Spring 2015

Prerequisite: HIST 105

HIST 424H (J ST 424H, RL ST 424H)

Monotheism and the Birth of the West (3) The birth of monotheism and its relation to social organization, the idea of individuality, and science.

Effective: Fall 2012

Prerequisite: CAMS 004 CAMS 110 CAMS 120 or HIST 102

HIST 426 (HIST 426) (IL)

Holocaust (3) This course is an in-depth study of the history of the Holocaust in Europe that puts special emphasis on primary sources.

Effective: Summer 2015

Prerequisite: J ST 010 J ST 121 or by consent of the program

HIST 427 (IL)

Germany Since 1860 (3) Bismarckian power-state; rise to economic dominance; welfare and warfare under Weimar republic and Hitler; post-1945 reconstruction and democracy.

Effective: Spring 2006

Prerequisite: 3 credits in European history

HIST 428 (S T S 428) (IL)

The Darwinian Revolution (3) The origins and implications of evolutionary theory.

Effective: Spring 2006

Prerequisite: an introductory science course and a history course

HIST 430 (IL)

Eastern Europe in Modern Times (3) Influence of geography, economic conditions, and nationalism upon the Eastern European and Balkan peoples; Pan-Slavism, conflicting interests of the great powers.

Effective: Spring 2006

Prerequisite: HIST 001 or HIST 002

HIST 431 (AF AM 431) (US;IL)

Black Liberation and American Foreign Policy (3) This course deals with American foreign policy and Black liberation in Africa since 1945.

Effective: Fall 2012

Prerequisite: 3 credits in African history; 3 credits in African political science; or 3 credits in American political science

HIST 432 (AF AM 432) (IL)

Between Nation and Empire: The Caribbean in the 20th Century (3) An exploration of the political evolution of the Caribbean Region over the course of the 20th Century.

Effective: Fall 2012

Prerequisite: HIST 250

HIST 433 (IL)

Imperial Russia, 1700-1917 (3) Enlightened absolutism, mercantilism, westernization; economic progress, liberal reforms, and revolutionary movement; major intellectual and cultural trends; Russia as great power.

Effective: Spring 2006

Prerequisite: HIST 141

HIST 434 (IL)

History of the Soviet Union (3) Revolution; social, political, economic, and cultural continuity and change in the U.S.S.R. since 1917.

Effective: Spring 2006

Prerequisite: HIST 141 or HIST 142

HIST 436 (IL)

Great Britain Under the Tudors and Stuarts, 1485-1688 (3) Religious, political, and constitutional developments in the British Isles.

Effective: Spring 2006

Prerequisite: HIST 001 or HIST 002

HIST 437 (IL)

Great Britain 1688-1867 (3) Social, economic, and political history of Great Britain from late Stuart times until the mid-Victorian era.

Effective: Spring 2006

Prerequisite: HIST 001 or HIST 002

HIST 438 (IL)

Great Britain 1867-Present (3) Social, economic, and political history of Great Britain from the mid-Victorian era to the present.

Effective: Spring 2006

Prerequisite: HIST 001 or HIST 002

HIST 440 (US)

Colonial America to 1753 (3) Background, establishment, and growth of the American colonies, including economic, political, social, religious, and intellectual developments.

Effective: Spring 2006

Prerequisite: HIST 020 3 additional credits in history

HIST 441 (US)

Revolutionary America, 1753-1783 (3) Forces in Great Britain and America causing withdrawal of thirteen colonies from the British Empire and the Revolutionary War.

Effective: Spring 2006

Prerequisite: HIST 020 3 additional credits in history

HIST 442 (US)

The Early American Republic, 1783-1850 (3) Confederation and Constitution; the Federalist and Jeffersonian periods; "the Era of Good Feelings"; "the Age of Jackson."

Effective: Spring 2006

Prerequisite: 3 credits in American history

HIST 444 (US)

The United States in Civil War and Reconstruction--1850-1877 (3) Causes of the Civil War; conduct of the war, North and South; impact of the war; problems of Reconstruction.

Effective: Spring 2006

Prerequisite: HIST 130

HIST 444W (US)

The United States in Civil War and Reconstruction--1850-1877 (3) Causes of the Civil War; conduct of the war, North and South; impact of the war; problems of reconstruction.

Effective: Spring 2008

Prerequisite: HIST 130 or HIST 020

HIST 445 (US)

The Emergence of Modern America (3) Economic, social, political history of the United States, 1877-1919, emphasizing growth of industrialism and development as a modern nation.

Effective: Spring 2006

Prerequisite: HIST 021 3 additional credits in history economics or political science

HIST 446 (US)

America Between the Wars (3) The Roaring Twenties, the Great Crash, Depression, and New Deal; war debts, reparations, isolationism, and World War II.

Effective: Spring 2006

HIST 447 (AM ST 447) (US)

Recent American History (3) Contemporary economic, social, and political aspects of the United States and its role as a world power since 1945.

Effective: Spring 2014

Prerequisite: HIST 021 3 additional credits in history economics or political science

HIST 448 (US)

America in the 1960s (3) Social, political, and cultural themes in the United States in the 1960s.

Effective: Spring 2006

Prerequisite: HIST 021

HIST 449 (US)

Constitutional History of the United States to 1877 (3) Colonial background; framing and adoption of the constitution; development of the court under Marshall and Taney; sectionalism, Civil War, Reconstruction.

Effective: Spring 2006

Prerequisite: HIST 020 or HIST 021 3 additional credits in history or political science

HIST 450 (US)

Constitutional History of the United States Since 1877 (3) Constitutional developments from laissez-faire to the welfare state; imperialism, war, internationalism; the contemporary court, civil liberties, and civil rights.

Effective: Spring 2006

Prerequisite: HIST 020 or HIST 021 3 additional credits in history or political science

HIST 451 (US)

The Consumer Revolution (3) The origins and impact of American consumer society since 1870.

Effective: Spring 2006

Prerequisite: three credits in history marketing or advertising

HIST 452 (US;IL)

History of U.S. Foreign Relations (3) History of U.S. foreign relations since 1789; emphasis on twentieth century.

Effective: Spring 2006

Prerequisite: HIST 020 or HIST 021

HIST 453

American Environmental History (3) The history of the ways Americans have used and thought about the environment since 1500.

Effective: Summer 2012

Prerequisite: GEOG 030 ; and HIST 020 HIST 021 ; or 6 credits in the humanities or social sciences

HIST 454 (US)

American Military History (3) Development of U.S. military policy, 1776 to the present, emphasizing the conduct of our wars, interrelationship of civil and military authority.

Effective: Spring 2006

Prerequisite: HIST 020 or HIST 021

HIST 456Y (US)

The Social History of American Vernacular Building, 1607-1980 (3) Social, historical, and cultural context of American building including settlements, housing, workplaces, stores, recreational facilities; changes over time.

Effective: Spring 2006

Prerequisite: 3 credits in American history

HIST 459Y (US)

Social and Cultural History of the United States Since 1783 (3) Role of immigration, social reform movements, religion, education, science, literature, and the arts in American history.

Effective: Spring 2006

HIST 461 (US;IL)

The Emergence of the American City: 1100-1880 (3) The growth of American cities from their urban origins in Europe and the Native-American Southwest to 1880.

Effective: Spring 2006

HIST 462 (US;IL)

The Twentieth Century City (3) Political, economic, social, and cultural transformations in American cities from 1880 to

2000.

Effective: Spring 2006

HIST 463 (US)

American Thought to 1865 (3) Introduction to, scholarly commentary on, major documents of American Intellectual history, early colonial period to end of the Civil War.

Effective: Spring 2006

Prerequisite: any American history course at the college freshman level

HIST 464 (US)

American Thought from 1865 (3) Introduction to, scholarly commentary on, major documents of American Intellectual history from end of the Civil War to the present.

Effective: Spring 2006

Prerequisite: any American history course at the college freshman level

HIST 465 (AF AM 465) (US)

The Post-World War II Civil Rights Movement (3) The civil rights struggle and its impact upon American politics.

Effective: Spring 2015

Prerequisite: AF AM 100 HIST 021 HIST 152 PL SC 001 or PL SC 002

HIST 466 (WMNST 466) (US;IL)

Lesbian and Gay History (3) Critical exploration of the history of sexuality, focusing especially on the emergence of modern lesbian and gay identities.

Effective: Spring 2013

Prerequisite: HIST 117 WMNST 100

HIST 467 (LTNST 467) (US;IL)

Latin America and the United States (3) Historical development of policies of the United States with regard to Latin-American affairs from colonial times to the present.

Effective: Fall 2008

HIST 468 (IL)

Mexico and the Caribbean Nations in the Twentieth Century (3) Political, economic, and social development in Mexico and the Caribbean since 1900. Emphasis on Mexican, Guatemalan, and Cuban revolutions.

Effective: Spring 2016

HIST 469 (CRIMJ 469)

Drugs and Drug Policy in the United States (3) Examines the history and dimensions of drug use and analyzes the impact of drug policy.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or HIST 021

HIST 471Y (RL ST 471Y) (IL)

Classical Islamic Civilization, 600-1258 (3) Pre-Islamic Arabia; Muhammad; Arab conquests; Islamic beliefs and institutions; literary, artistic, and scientific achievements; relations with Europe; breakdown of unity.

Effective: Fall 2006

HIST 472 (J ST 472) (IL)

The Ottoman Empire and Other Muslim States (3) Turkish and Mongol invasions; Mamluks; Ottoman expansion and institutions; Safavid Persia; disintegration and reform; emergence of modern Turkey and Iran.

Effective: Fall 2015

Prerequisite: HIST 181

HIST 473 (J ST 473) (IL)

The Contemporary Middle East (3) Political, economic, and social changes in Turkey, Iran, Israel, and the Arab countries in the twentieth century; Arab-Israeli conflict.

Effective: Fall 2015

HIST 475Y (ASIA 475Y) (IL)

The Making and Emergence of Modern India (3) India's transition to social, economic, and political modernity through the experience of British colonial rule and the nationalist struggle.

Effective: Spring 2015

Prerequisite: HIST 010 HIST 011 HIST 172 HIST 175 HIST 176 HIST 181 or HIST 191

HIST 476 (ASIA 476) (IL)

Technology & Society in Modern Asia (3) Role of technology in modernization, national identity, and foreign relations of an Asian country from 19th century to present day.

Effective: Summer 2014

Prerequisite: ASIA 100 HIST 172 HIST 173 HIST 174 HIST 175 HIST 176 HIST 183 HIST 184 HIST 188

HIST 479 (IL)

History of Imperialism and Nationalism in Africa (3) Theories and types of imperialism; varied patterns of colonial administration; initial African responses; nationalism; decolonization and independence.

Effective: Spring 2006

Prerequisite: HIST 191

HIST 480 (ASIA 480) (IL)

Japan in the Age of Warriors (3) An overview of Japan the 10th to 17th century, a period of political decentralization, cultural efflorescence, and social change.

Effective: Fall 2014

Prerequisite: HIST 107 HIST 172 HIST 174 or HIST 407

HIST 481 (ASIA 481) (IL)

Modern Japan Since 1800 (3) The transformation of Japan from a relatively isolated, agricultural nation into a highly industrialized world power.

Effective: Fall 2014

Prerequisite: HIST 172 HIST 174 or HIST 175

HIST 483 (ASIA 483) (IL)

Middle China (3) The social, political, and cultural issues and developments from the 8th to 16th century.

Effective: Spring 2015

Prerequisite: HIST 174

HIST 484Y (ASIA 484Y) (IL)

History of Chinese Thought (3) A study of the dynamic historical development of Chinese thought with its diverse expressions from antiquity to the present.

Effective: Fall 2014

Prerequisite: HIST 174 or HIST 175

HIST 485Y (ASIA 485Y) (IL)

China's Last Empire: The Qing Dynasty, 1644-1911 (3) China from 1644 founding of Qing dynasty to 1911 fall; Chinese society and institutions, imperialism and China's internal diversity.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H (Honors in East Asian history)

HIST 486 (ASIA 486) (IL)

China in Revolution (3) China from 1900 to the present; nationalism, cultural change; development of communism.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H (Honors in East Asian History)

HIST 490 (L ST 490)

Archival Management (1-3) Introduction to the principles and procedures in the management of archives and historical manuscripts.

Effective: Fall 1978

HIST 493 (ASIA 493) (IL)

Japan in the World (3) Study of Japan's foreign relations and position in the international community from the early 19th century to the present.

Effective: Spring 2015

Prerequisite: ASIA 100 HIST 172 HIST 175 or HIST 481

HIST 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

HIST 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

HIST 495

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practicums, or internships.

Effective: Summer 1986

Prerequisite: prior written approval of proposed assignment by instructor

HIST 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

HIST 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

HIST 499 (IL)

Foreign Study--History (1-6) Study in selected foreign countries of various periods and topics in history.

Effective: Summer 2005

Prerequisite: 3 credits in the appropriate introductory history course for the geographic location specified

IT 050

Italian Conversation Tutorial (1-3) Roundtable conversation practicum for students concurrently enrolled in IT 001, 002, 003, 010, or 020. May be repeated up to 3 times for credit.

Effective: Summer 2004

Prerequisite: Concurrent enrollment in IT 001 IT 002 IT 003 IT 010 or IT 020

IT 083S (GH;IL)

First-Year Seminar in Italian Literature, Film, and Culture (3) Introduction to the study of Italian literature, film, and culture.

Effective: Summer 2005

IT 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

IT 130 (GH;IL)

Italian Culture and Civilization (3) Italian life from antiquity to the present; literature, film, the arts, and contemporary problems in historical perspective.
Effective: Summer 2005

IT 131 (GH;US)

Italian American Culture and Civilization (3) Italian-American experience from the late 19th century to present. Socio-political issues seen through cinema and through literary and other readings.
Effective: Summer 2005

IT 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.
Effective: Spring 1995

IT 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

IT 230 (GH)

Masterpieces of Italian Literature in English Translation (3) Emphasis on works and authors of international importance. Lectures, readings, and written work in English.
Effective: Summer 1995

IT 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.
Effective: Summer 1994

IT 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.
Effective: Spring 1998

IT 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.
Effective: Spring 1985

IT 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

IT 320

Introduction to Italian Culture; Food, Fashion, Family (3) Focus on the social, historical, and socio-political issues of Italy in the last two centuries.
Effective: Summer 2004
Prerequisite: IT 003

IT 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.
Effective: Summer 1996
Prerequisite: prior approval of proposed assignment by instructor

IT 412

Theory and Practice of Translation (3) Advanced practicum in Italian explores the technical, artistic, and practical applications of translation between Italian and American cultures.
Effective: Summer 2004
Prerequisite: any 300-level course in Italian

IT 415

Dante (3) Readings in the Divina Commedia and the related lesser works of Dante Alighieri.
Effective: Summer 2011

IT 422

Topics in the Italian Renaissance (3) Topics vary by year and may include "Theories of Love," "Magic, Witchcraft, Alchemy, and the Emergence of Modern Science," etc.
Effective: Fall 2005
Prerequisite: any Italian course at the 300-level

IT 450

Nineteenth-Century Italian Literature (3) Italian romanticism, Verismo and neoclassicism, their origin and development in the novel, poetry, and drama.
Effective: Fall 2015
Prerequisite: any 300-level IT course

IT 460

Twentieth-Century Italian Literature (3) Modern and contemporary Italian prose, drama, and poetry.

Effective: Fall 2015

Prerequisite: any 300-level IT course

IT 475

Modern Italian Literature and Cinema (3) Focus on silent films, fascism, WWII, Resistance, Neorealism, and reactions against Neorealism.

Effective: Spring 2003

IT 490

Dante in Translation (3) The reading of Dante's Divine Comedy and selected minor works.

Effective: Fall 1983

Prerequisite: junior standing or permission of instructor

IT 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

IT 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

IT 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

IT 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

J ST 004 (CAMS 004, RL ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationship to culture.

Effective: Summer 2005

J ST 010 (HEBR 010) (GH;IL)

Jewish Civilization (3) Life of the Jewish people from biblical times; emphasizing cultural, religious, and institutional developments.

Effective: Summer 2005

J ST 012 (CAMS 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

J ST 083S (GH;IL)

First-Year Seminar in Jewish Studies (3) Critical approaches to the history, sociology, and literature of Jewish Studies.

Effective: Summer 2005

J ST 090 (CAMS 090, RL ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from earliest times (c. 3000 BCE) to present.

Effective: Fall 2015

J ST 102 (CAMS 102, HIST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

J ST 104 (ENGL 104) (GH)

The Bible as Literature (3) Study of the English Bible as a literary and cultural document.

Effective: Fall 2015

J ST 106 (RL ST 106) (GH;IL)

Mysticism and Kabbalah (3) A survey of the history, philosophy, and cultural impact of various mystical traditions in relation to world religions.

Effective: Fall 2015

J ST 110 (CAMS 110, RL ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.

Effective: Summer 2005

J ST 111 (CAMS 111, RL ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.

Effective: Summer 2005

J ST 112 (CAMS 121, RL ST 121) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the context of first century Palestinian Judaism.

Effective: Fall 2015

J ST 114 (RL ST 114) (GH;US;IL)

Modern Judaism (3) Trends in Jewish life and thought since the French revolution; Judaism's responses to the challenge of modernity.

Effective: Summer 2005

J ST 116 (CMLIT 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.

Effective: Summer 2015

J ST 118 (HIST 118) (US;IL)

Modern Jewish History (3) Jewish social and political history from 1492 to the present.

Effective: Fall 2015

J ST 120 (CAMS 120, RL ST 120) (GH)

New Testament (3) Introduction to the history, literature, and religion of early Christianity in the Jewish-Hellenistic setting.

Effective: Spring 2004

J ST 121 (HIST 121) (GH;IL)

History of the Holocaust 1933-1945 (3) Historical analysis of holocaust themes.

Effective: Summer 2005

J ST 122 (CAMS 122, RL ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

J ST 123 (CAMS 123, RL ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of the ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

J ST 124 (CAMS 124, RL ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.

Effective: Summer 2005

J ST 131 (CMLIT 110) (GH;US;IL)

Jewish Literature: An International Perspective (3) Literature of the Jewish tradition in various cultures and contexts, such as Europe, Israel, Islamic countries, and the Americas.

Effective: Spring 2011

J ST 143 (HIST 143) (GH;IL)

History of Fascism and Nazism (3) The study of right-wing totalitarianism in the twentieth century, with special emphasis on Fascist Italy and Nazi Germany.

Effective: Fall 2015

J ST 153 (CAMS 153, RL ST 153) (GH;IL)

Dead Sea Scroll (3) Examines the discovery, contents, and interpretations of the Dead Sea Scroll, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

J ST 160 (CAMS 160, RL ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.

Effective: Summer 2014

J ST 181 (HIST 181) (GH;IL)

Introduction to the Middle East (3) Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918.

Effective: Fall 2015

J ST 190 (HIST 190, RL ST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.

Effective: Summer 2015

J ST 261Y (HIST 261Y) (GH;US;IL)

Ghetto: From Venice to Detroit (3) This course explores why certain groups have been segregated in cities around the world in the last 500 years.

Effective: Spring 2015

J ST 280 (WMNST 280, RL ST 280) (GH;IL)

Women and Judaism (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.

Effective: Fall 2006

J ST 401 (HIST 401) (IL)

Ancient Technologies and Socio-cultural History in the Ancient Levant (3) Social and intellectual development in the Ancient Levant as they affected and were affected by technological development.

Effective: Spring 2006

Prerequisite: RL ST 110

J ST 409Y (HIST 409Y, RL ST 407Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.

Effective: Summer 2015

J ST 411 (RL ST 411) (US;IL)

Jewish Studies (3) Study of the life and thought of a particular period or movement in the history of Judaism.

Effective: Spring 2006

Prerequisite: 3 credits in religious studies

J ST 416 (HIST 416)

Zionism (3) History of Zionist thought and politics to the foundation of Israel 1948.

Effective: Fall 2015

J ST 426 (HIST 426) (IL)

Holocaust (3) This course is an in-depth study of the history of the Holocaust in Europe that puts special emphasis on primary sources.

Effective: Summer 2015

Prerequisite: J ST 010 J ST 121 or by consent of the program

J ST 472 (HIST 472)

The Ottoman Empire and Other Muslim States (3) Turkish and Mongol invasions; Mamluks; Ottoman expansion and institutions; Safavid Persia; disintegration and reform; emergence of modern Turkey and Iran.

Effective: Fall 2015

Prerequisite: HIST 181

J ST 473 (HIST 473) (IL)

The Contemporary Middle East (3) Political, economic, and social changes in Turkey, Iran, Israel, and the Arab countries in the twentieth century; Arab-Israeli conflict.

Effective: Fall 2015

J ST 478 (RL ST 478)

Ethics After the Holocaust (3) Explores the philosophical effects of the Holocaust for thinking about the primary question: Is ethics possible?

Effective: Summer 2012

Prerequisite: one course in Jewish Studies or Philosophy

JAPNS 120 (GH;IL)

Japanese Literature in Its Cultural Context (3) Japanese literature and film from classical through contemporary times, with attention to changing cultural settings. Taught in English.

Effective: Spring 2010

JAPNS 172 (ASIA 172, HIST 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.

Effective: Fall 2016

JAPNS 402 (IL)

Level Three Japanese B (4) Exclusively for study abroad returnees. To further develop Japanese proficiency in speaking, listening, reading, and writing.

Effective: Spring 2011

Prerequisite: JAPNS 401

KINES 442 (CAMS 442) (IL)

Sport in Ancient Greece and Rome (3) An examination of the continuity of sport in ancient Greek and Roman societies.

Effective: Spring 2008

Prerequisite: CAMS 025 CAMS 033 CAMS 140 CAMS 150 CAMS 100 CAMS 101 or KINES 141

L ST 490 (HIST 490)

Archival Management (1-3) Introduction to the principles and procedures in the management of archives and historical manuscripts.

Effective: Fall 1978

LATIN 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LATIN 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1995

LATIN 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LATIN 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

LATIN 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Spring 2001

LATIN 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Fall 1983

LATIN 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LATIN 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

LATIN 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LATIN 402

Republican Literature (3-12) Selected works by Plautus, Lucretius, Catullus, Cicero (content varies).

Effective: Summer 1995

Prerequisite: LATIN 003

LATIN 403

Augustan Age Literature (3-12) Selected works by Virgil, Horace, Propertius, Tibullus, Ovid, Livy (content varies).

Effective: Summer 1995

Prerequisite: LATIN 003

LATIN 404

Silver Age Literature (3-12) Selected works by Petronius, Seneca, Tacitus, Juvenal, Martial, Pliny the Younger (content varies).

Effective: Summer 1995

Prerequisite: LATIN 003

LATIN 450W

History of Latin (3) History of the Latin language and its speakers, from their origins to the 2nd century C.E.

Effective: Summer 1994

Prerequisite: LING 102 ; LATIN 401 LATIN 402 or LATIN 403

LATIN 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

LATIN 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

LATIN 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

LATIN 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

LATIN 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LER 403 (IL)

International Human Resource Studies (3) Course exploring human resource management from an international perspective.

Effective: Spring 2015

Prerequisite: LER 100

LING 102 (GH)

Introduction to Historical Linguistics (3) How languages change and evolve over time; language families; effects of borrowing and language contact.

Effective: Spring 2002

Prerequisite: LING 010 or LING 100

LTNST 100 (GH;US)

Introduction to Latina/s Studies (3) This course provides an interdisciplinary introduction to the study of Latinas/os in the U.S.

Effective: Fall 2012

LTNST 226 (ENGL 226) (GH;US;IL)

Latina and Latino Border Theories (3) English 226 will constitute a wide-ranging examination of contemporary texts (1960-present) central to the construction of contemporary Latino/a culture.

Effective: Fall 2012

LTNST 300 (WMNST 300) (US)

Latinas in the US: Gender Culture and Society (3) This course examines the historical development, theoretical premises, and political, social, and artistic contributions of Latina feminisms in the United States.

Effective: Spring 2013

Prerequisite: LTNST 100 or WMNST 100

LTNST 315 (SPAN 315) (GH;US)

Spanish and Spanish-speakers in the U.S. (3) In this course, we investigate various aspects of the language(s) and language behaviors of U.S. Latinos.

Effective: Fall 2012

LTNST 403 (CMLIT 403) (US)

Latina/o Literature and Culture (3) Literary and other forms of cultural expression (film, music, art, and theater) are compared across different Latina/o communities.

Effective: Fall 2012

Prerequisite: 3 credits in the humanities or in any LTNST course or 4th-semester proficiency in Spanish

LTNST 426 (ENGL 426) (US)

Chicana and Chicano Cultural Production: Literature, Film, Music (3) An in-depth study of Chicana/Chicano literature, film, and music from the inception of the Chicano Movement (1965-1975) to the present.

Effective: Fall 2012

Prerequisite: 3 credits in English

LTNST 467 (HIST 467) (US;IL)

Latin America and the United States (3) Historical development of policies of the United States with regard to Latin-American affairs from colonial times to the present.

Effective: Fall 2012

MEDVL 107 (HIST 107) (GH;IL)

Medieval Europe (3) Rise and development of the civilization of medieval Europe from the decline of Rome to 1500.

Effective: Spring 2006

MEDVL 108 (GH;IL)

Medieval Civilization (3) An interdisciplinary introduction to literature, art, and thought of the Middle Ages.

Effective: Spring 2006

MEDVL 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1995

MEDVL 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MEDVL 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

MEDVL 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MEDVL 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

MEDVL 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MEDVL 411 (HIST 411) (IL)

Medieval Britain (3) Political, cultural, and economic history of Britain from circa 400 to 1485 with an emphasis on the kingdom of England.

Effective: Spring 2006

Prerequisite: 6 credits in European history or medieval studies

MEDVL 413 (HIST 413) (IL)

Medieval Celtic Studies (3) Celtic civilization from antiquity to the end of the middle ages.

Effective: Spring 2006

Prerequisite: 3 credits in medieval studies or in language literature or European history of the medieval period

MEDVL 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

MEDVL 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

MEDVL 495

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 2002

Prerequisite: prior approval of proposed assignments by instructor

MEDVL 496

Independent Studies (1-18) Creative projects, including research and design, that are supervised on an individual basis and that fall outside the scope of formal courses.

Effective: Spring 1995

MEDVL 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1995

MEDVL 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

OLEAD 100 (GS)

Introduction to Leadership (3) This course introduces key leadership concepts and practices based on current theory and research. It is designed to help students to discover the knowledge and skills that are characteristic of effective leaders.

Effective: Summer 2012

PHIL 001 (GH)

Basic Problems of Philosophy (3) Introduction to central philosophical themes, including the mind/body problem, the existence of God, ethical problems, the nature of reality. Students may take only one course for General Education credit from PHIL 001 GH or 004 GH.

Effective: Spring 2000

PHIL 002 (GH)

Philosophy, Politics, and Social Theory (3) Examines relations between political and social organizations, the justification and limits of the state, and issues concerning individuality and community.

Effective: Fall 2003

PHIL 003 (GH)

Persons, Moral Values and the Good Life (3) Major ethical positions and assumptions regarding questions of freedom, choice, obligation, and conflicts in contemporary moral conduct, values, and reasoning.

Effective: Fall 2004

PHIL 005 (GH)

Philosophy, Art, and Film (3) Explores relations between images and reality, representation and culture, and beauty and politics through film, artworks, and aesthetic theories.

Effective: Spring 2002

PHIL 006 (CMLIT 006) (GH;IL)

Philosophy and Literature in Western Culture (3) Explores fundamental issues of human existence through the traditions of western literature and philosophy.

Effective: Spring 2006

PHIL 007 (GH;IL)

Asian Philosophy (3) Introduction to philosophical, moral, and aesthetic teachings of Asian traditions such as Hinduism, Buddhism (including Zen), Taoism, Confucianism, and Shintoism.

Effective: Summer 2005

PHIL 008 (WMNST 008) (GH)

Philosophy and Feminism (3) Explores diverse feminist philosophies of culture and knowledge, and examines gender's role in accounts of reality, truth, morality, and justice.

Effective: Spring 2006

PHIL 009 (GH;US)

Philosophy, Race, and Diversity (3) Critically examines the significance of race and cultural diversity for, and in, understandings of reality, knowledge, truth, morality, and justice.

Effective: Summer 2005

PHIL 010 (GH)

Critical Thinking (3) Discussion of the validity, soundness, and fallacies of everyday language use and reasoning; informal logic; and manipulative arguments and propaganda.

Effective: Fall 2003

PHIL 010S (GH)

Critical Thinking (3) Discussion of the validity, soundness, and fallacies of everyday language use and reasoning; informal logic; and manipulative arguments and propaganda.

Effective: Spring 2005

PHIL 011 (GH)

Philosophy, Science, and Truth (3) Examines the philosophical foundations of natural scientific inquiry, knowledge, objectivity, and the relation of scientific truth to common sense.

Effective: Fall 2003

PHIL 013 (GH)

Philosophy, Nature, and the Environment (3) Studies competing historical and contemporary conceptions of nature, their philosophical foundations, and their implications for environmental problems and public policy.

Effective: Fall 2003

PHIL 014 (GH;US)

Philosophy of Love and Sex (3) Explores Western theories and attitudes concerning intimacy and examines various ethical issues involving love and sex.

Effective: Summer 2005

PHIL 083S (GH)

First-Year Seminar in Philosophy (3) Critical introduction to philosophical issues in ethics, social and political theory, religion, art, metaphysics, and epistemology.

Effective: Summer 1999

PHIL 098

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Fall 2001

PHIL 100 (GH)

The Meaning of Human Existence (3) Explores differing views of the significance of human life, the meaning of freedom, and the way to a meaningful life.

Effective: Fall 2003

PHIL 101 (GH)

Pragmatism and American Philosophy (3) An introduction to American thought and its relation to American culture, with a focus on the development of pragmatism.

Effective: Fall 2003

PHIL 102 (GH)

Existentialism and European Philosophy (3) Introduction to European philosophy and issues of life, death, meaning, and absurdity, with a focus on existentialism and its development.

Effective: Fall 2003

PHIL 103 (GH)

Introduction to Ethics (3) Ethical theory about virtue, duty, autonomy, and life quality applied to moral problems, including character, violence, oppression, abortion, and suicide.

Effective: Fall 2003

PHIL 103W (GH)

Introduction to Ethics (3) Ethical theory about virtue, duty, autonomy, and life quality applied to moral problems, including character, violence, oppression, abortion, and suicide.

Effective: Fall 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 105 (GH)

Introduction to Philosophy of Law and Legal Ethics (3) Historical and contemporary philosophies of law; concepts of responsibility, property, rights, and justice; and ethical issues in legal practice.

Effective: Fall 2003

PHIL 106 (GH)

Introduction to Business Ethics (3) Studies ethical foundations of business and ethical problems in business practices such as advertising, international trade, labor relations, and marketing.

Effective: Fall 2003

PHIL 107 (S T S 107) (GH)

Introduction to Philosophy of Technology (3) The character of technology; its relation to human values; philosophical assumptions in its development; and how it transforms the world.

Effective: Spring 2004

PHIL 108 (GH)

Introduction to Social and Political Philosophy (3) Critical introduction to political authority, rights, justice, community, inequality, power, pluralism, and other contemporary, social, and political issues.

Effective: Fall 2003

PHIL 108W (GH)

Introduction to Social and Political Philosophy (3) Critical introduction to political authority, rights, justice, community, inequality, power, pluralism, and other contemporary, social, and political issues.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 109 (GH)

Introduction to Aesthetics (3) Examines the nature of art and aesthetic experience, art's relation to beauty and truth, and the nature of creativity.

Effective: Fall 2003

PHIL 110 (GH)

Introduction to Philosophy of Science (3) Examines science's assumptions about knowledge and reality, the relation between science and culture, and the nature of scientific progress.

Effective: Fall 2003

PHIL 113 (GH)

Introduction to Philosophy of Literature (3) Examines philosophical ideas in literature, literary forms in philosophies, style and genre, and relation of philosophy, literature, writing, and culture.

Effective: Fall 2003

PHIL 115 (GH)

Introduction to Philosophy and Education (3) Examines the nature and goals of education, the philosophical foundations of educational theories, and their economic, political, and cultural implications.

Effective: Fall 2003

PHIL 118 (GH)

Introduction to Environmental Philosophy (3) Considers the moral status of the environment and applies ethical theory to issues such as preservation, hunger, pollution, and sustainability.

Effective: Fall 2003

PHIL 122 (GH)

Introduction to Philosophy of History (3) Examines methodological foundations and interpretations of history, the objectivity of history, and the issue of history as design or chance.

Effective: Fall 2003

PHIL 123 (GH)

Introduction to Ethics in Media and Journalism (3) Studies ethical problems, human values, and politics in differing media forms and the ways media shape such problems and values.

Effective: Fall 2003

PHIL 124 (GH)

Introduction to Philosophy of Religion (3) Explores the meaning of religious belief and experience, the existence of God, ideas of spirituality, and the question of immortality.

Effective: Fall 2003

Prerequisite: third-semester standing

PHIL 125 (GH)

Introduction to Theories of Knowledge (3) Historical and contemporary views on the foundations and conditions of knowledge, belief, justification, and truth, conception, perception, and interpretation.

Effective: Fall 2003

PHIL 125W (GH)

Introduction to Theories of Knowledge (3) Historical and contemporary views on the foundations and conditions of knowledge, belief, justification, and truth, conception, perception, and interpretation.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 126 (GH)

Introduction to Metaphysics (3) Explores the nature of being and reality, the problem of free will and the mind/body problem, identity, and causality.

Effective: Fall 2003

PHIL 126W (GH)

Introduction to Metaphysics (3) Explores the nature of being and reality, the problem of free will and the mind/body problem, identity, and causality.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 127 (GH)

Introduction to Philosophy of Mind (3) Problems and concepts of mind and consciousness including mind-brain identification, the nature of subjectivity, identity, and artificial intelligence.

Effective: Fall 2003

PHIL 129 (GH)

Introduction to Philosophy of Language (3) Studies the nature of meaning in language, how we acquire language, communication, signs, and language as descriptive of reality.
Effective: Fall 2003

PHIL 132 (RL ST 131) (GH)

Introduction to Bioethics (3) Studies questions of ethics in relation to biotechnology research and implementation, genetic engineering, medicine, animal and human rights.
Effective: Fall 2003

PHIL 197

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.
Effective: Spring 1995

PHIL 198

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.
Effective: Fall 2001

PHIL 199 (IL)

Foreign Study--Philosophy (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

PHIL 200 (CAMS 200) (GH)

Ancient Philosophy (3) Examines the thought and influence of major Western thinkers from the pre-Socratics to the neo-Platonists, emphasizing Plato and Aristotle.
Effective: Fall 2003

PHIL 201 (GH)

Medieval Philosophy (3) Examines the thought and influence of major Western thinkers from the fourth to the fifteenth centuries, emphasizing Augustine and Aquinas.
Effective: Fall 2003

PHIL 202 (GH)

Modern Philosophy (3) Examines the thought and influence of major Western thinkers from Descartes to Kant, emphasizing rationalism and empiricism, and critical philosophy.
Effective: Fall 2003

PHIL 203 (GH)

Nineteenth Century Philosophy (3) Examines the thought and influence of major Western thinkers from Hegel to Nietzsche, including Marx, Kierkegaard, and Schopenhauer.
Effective: Fall 2003

PHIL 204 (GH)

Twentieth Century Philosophy (3) Examines the thought and influence of major Western thinkers of the century, including pragmatists, phenomenologists, existentialists, critical theorists, and feminists.
Effective: Fall 2003

PHIL 208 (GH)

Contemporary Philosophy (3) Recent trends in philosophical thought and culture, hybrid philosophies, and the philosophical landscape of the future.
Effective: Fall 2003

PHIL 221 (GH)

Philosophy of Science (3) An inquiry into the form and function of concepts, laws, theories, and into the character of scientific explanation and prediction.
Effective: Fall 2003

PHIL 233 (S T S 233) (GH)

Ethics and the Design of Technology (3) Ethics and individual and group decision-making in the design of technology including design projects and specific attention to institutional ethics.
Effective: Spring 2004

PHIL 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.
Effective: Summer 1994

PHIL 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.
Effective: Fall 1983

PHIL 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.
Effective: Fall 1983

PHIL 298

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Fall 2001

PHIL 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PHIL 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

PHIL 398

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Fall 2001

PHIL 399 (IL)

Foreign Study--Philosophy (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PHIL 401 (AM ST 421)

American Philosophy (3) Survey of key figures and movements in American thought including the Transcendentalists, the Pragmatists, and contemporary developments.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy or 6 credits of philosophy at the 200-level or 5th semester standing

PHIL 402

European Philosophy (3 per semester, maximum of 6) Survey of key figures and movements of Europe, including phenomenology, existentialism, structuralism and post-structuralism, and critical theory.

Effective: Fall 2007

Prerequisite: PHIL 102 6 credits of philosophy at the 200 level or 5th semester standing

PHIL 403

Environmental Ethics (3) Examines ethical theories, justice, rights, community, and human values revolving around such issues as preservation, conservation, pollution, sustainability, and population.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including PHIL 103 or 6 credits of philosophy at the 200 level or 5th semester standing

PHIL 405

Philosophy of Law (3) Examines philosophical views of the nature of law, legal ethics, law and society through questions regarding definition, interpretation, and institutions.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including PHIL 105 or 6 credits of philosophy at the 200 level or 5th semester standing

PHIL 406

Business Ethics (3) Examines the moral justification of business practices and economic systems through critical analyses of case studies and applied ethical theories.

Effective: Summer 1998

Prerequisite: fifth-semester standing

PHIL 407 (S T S 407)

Technology and Human Values (3) Interrelationships of twentieth-century technological change and human values. Emphasis on the social and ethical aspects of technological progress.

Effective: Spring 1999

Prerequisite: 9 credits of philosophy including PHIL 107 or 6 credits of philosophy at the 200 level

PHIL 408W

Social and Political Philosophy (3) Historical and philosophical foundations of political organization, authority, and justice, and contemporary issues of rights, community, and culture.

Effective: Fall 1998

Prerequisite: 9 credits in philosophy including PHIL 108 or 6 credits at the 200 level

PHIL 409

Aesthetics (3) Studies concepts of beauty, truth, value, representation, production and reproduction, and reality through philosophical theory and works of art.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including PHIL 109 or 6 credits of philosophy at the 200 level or 3 credits of art or 5th semester standing

PHIL 410

Philosophy of Science (3) Historical and contemporary foundational and methodological issues such as causality, relativity and epistemological relativism, teleology, and the nature of reality.

Effective: Fall 1998

Prerequisite: 9 credits of philosophy including PHIL 110 or 6 credits of philosophy at the 200 level

PHIL 413

Philosophy of Literature (3) Discusses truth, belief, illusion, imagination and creativity through philosophical literature,

as well as problems of philosophical writing.

Effective: Fall 1998

Prerequisite: 9 credits of philosophy including PHIL 113 or 6 credits of philosophy at the 200 level

PHIL 416

Philosophy of Social Science (3) Examines the philosophical nature and foundations of methodology, structures and objects, value-neutrality and objectivity in the social sciences.

Effective: Summer 2013

Prerequisite: 9 credits of philosophy including or 6 credits of philosophy at the 200 level

PHIL 418

Ethics (3) Examines ethical theories, justice, rights, community, and human values revolving around such issues as preservation, conservation, pollution, sustainability, and population.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including PHIL 103 or 6 credits of philosophy at the 200 level or 5th semester standing

PHIL 418W

Ethics (3) Examines ethical theories, justice, rights, community, and human values revolving around such issues as preservation, conservation, pollution, sustainability, and population.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including PHIL 103 or 6 credits of philosophy at the 200 level

PHIL 424

Philosophy of Religion (3) Examines the relation between faith and reason, the nature of religious experience, the problem of evil, the existence of God.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including PHIL 124 or 6 credits of philosophy at the 200 level or 5th semester standing

PHIL 425W

Epistemology (3) The nature of cognition and perception, the conditions of experience, and the justification and truth of belief.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including PHIL 125 or 6 credits of philosophy at the 200 level; in addition to ENGL 015 or ENGL 030

PHIL 426W

Metaphysics (3) Examines the nature of reality, the existence of freedom, and the nature of matter, mind, and values.

Effective: Summer 1998

Prerequisite: 9 credits in philosophy including PHIL 126 or 6 credits of philosophy at the 200 level

PHIL 427

Philosophy of Mind (3) Investigates problems of mind from the standpoint of traditional metaphysical views, modern scientific psychology, neuroscience, and artificial intelligence.

Effective: Spring 1999

Prerequisite: 9 credits of philosophy including PHIL 127 or 6 credits of philosophy at the 200 level

PHIL 432 (S T S 432)

Medical and Health Care Ethics (3) Examines ethical, political, and social issues in the research, implementation, and practice of medicine, medical technologies, and healthcare.

Effective: Fall 1998

Prerequisite: fifth-semester standing

PHIL 433 (S T S 433)

Ethics in Science and Engineering (3) Ethical issues arising in the practice of science and engineering and their philosophical analysis.

Effective: Fall 1995

PHIL 435 (S T S 435)

The Interrelation of Science, Philosophy, and Religion (3) The historical and transformative interactions between science and Western philosophical and religious views of nature, humanity, and God.

Effective: Spring 1996

PHIL 437 (IL)

World Philosophies and Cultures (3) Philosophical traditions, problems, and authors in African, Asian, Middle- Eastern, Native American, or other non-Western cultures and intellectual traditions.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including 6 credits of philosophy at the 200 level or 5th semester standing

PHIL 438 (WMNST 438)

Feminist Philosophy (3) Examines the central currents of feminist philosophy, selected problems and concepts regarding difference, gender and sex, identity, and political culture.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including 6 credits of philosophy at the 200-level or 5th semester standing

PHIL 453

Topics in Ancient Philosophy (3 per semester, maximum of 6) Examines the philosophy of central figures in ancient philosophy from the pre-Socratics to the post-Aristotelians and Neoplatonists.

Effective: Fall 1998

Prerequisite: 9 credits of philosophy including PHIL 200 or 6 credits of philosophy at the 200 level

PHIL 455

Topics in Modern Philosophy (3 per semester, maximum of 6) Descartes to Kant, including mind and reality, space and time, God and nature, morality and autonomy.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including PHIL 202 or 6 credits of philosophy at the 200 level

PHIL 456

Topics in Nineteenth Century Philosophy (3 per semester, maximum of 6) Hegel to Nietzsche, including nature and spirit, history and human nature, ideology and morality.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including PHIL 203 or 6 credits of philosophy at the 200 level

PHIL 457

Topics in Twentieth Century Philosophy (3 per semester, maximum of 6) Topics in the philosophy of figures such as Husserl, James, Russell, Wittgenstein, Heidegger, Merleau-Ponty, and Dewey.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including PHIL 204 or 6 credits of philosophy at the 200 level or 5th semester standing

PHIL 458

Topics in Contemporary Philosophy (3 per semester, maximum of 6) Topics in the philosophy of contemporary figures such as Foucault, Habermas, Rorty, Derrida, Rawls, Davidson, and MacIntyre.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including PHIL 208 or 6 credits of philosophy at the 200 level

PHIL 461

Plato (3 per semester, maximum of 6) Examines the metaphysics, epistemology, politics, aesthetics, and moral theory of this central figure in the history of philosophy.

Effective: Spring 1999

Prerequisite: 9 credits of philosophy including PHIL 200 or 6 credits of philosophy at the 200 level

PHIL 468 (J ST 468)

Jewish Philosophy (3) Explores major figures and trends in Jewish philosophy and their influences on other philosophical traditions.

Effective: Fall 2015

Prerequisite: one course in Philosophy and/or Jewish Studies

PHIL 473

German Idealism (3 per semester, maximum of 6) Critically examines the philosophy of central German idealists, including Kant, Fichte, Schelling, and Hegel, and its impact on later philosophy.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including either PHIL 202 or PHIL 203 or 6 credits of philosophy at the 200 level

PHIL 474

Kant (3 per semester, maximum of 6) Critical examination of the metaphysics, epistemology, aesthetics, legal and moral philosophy, and influence of Immanuel Kant.

Effective: Fall 1998

Prerequisite: 9 credits in philosophy including PHIL 202 or 6 credits of philosophy at the 200 level

PHIL 476

Hegel (3 per semester, maximum of 6) Critical examination of the metaphysics, moral theory, epistemology, and philosophy of history of this central figure of 19th-century philosophy.

Effective: Fall 1998

Prerequisite: 9 credits of philosophy including PHIL 203 or 6 credits of philosophy at the 200 level

PHIL 479

Critical Theory (3 per semester, maximum of 6) Examines the ontology, political and social thought of the Frankfurt School from Horkheimer and Adorno to Marcuse and Habermas.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including either PHIL 203 or 6 credits of philosophy at the 200 level

PHIL 485

Heidegger (3 per semester, maximum of 6) Studies Heidegger's metaphysical thought from his early to later works regarding being, history, subjectivity, aesthetics, language, and his influence.

Effective: Fall 1998

Prerequisite: 9 credits of philosophy including PHIL 402 or 6 credits of philosophy at the 200 level

PHIL 486

Wittgenstein (3 per semester, maximum of 6) Examines Wittgenstein's early and late work, including logical atomism, meaning, language games, forms of life, and the private-language argument.

Effective: Fall 1998

Prerequisite: 9 credits of philosophy including PHIL 204 or 6 credits of philosophy at the 200 level

PHIL 487

Analytic Philosophy (3 per semester, maximum of 6) Analytic philosophy's founding by Frege, Russell, Moore, Wittgenstein; and its contemporary development by Quine, Kripke, Dummett, and Davidson.

Effective: Fall 1998

Prerequisite: 9 credits of philosophy including PHIL 202 or PHIL 204 along with 3 credits of philosophy at the 200 level

PHIL 490

Dewey (3 per semester, maximum of 6) Critically examines the metaphysics, epistemology, ethics, logic, aesthetics, education theory, and social and political philosophy of this major American pragmatist.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including PHIL 401 or 6 credits of philosophy at the 200-level

PHIL 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

PHIL 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

PHIL 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

PHIL 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

PHIL 498

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Fall 2001

PHIL 499 (IL)

Foreign Study--Philosophy (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PL SC 111 (GH)

Debating the Purpose of Government (3) Students will become acquainted with a variety of political theories and debate their usefulness in considering contemporary political controversies.

Effective: Summer 2012

PORT 197

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1995

PORT 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PORT 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

PORT 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PORT 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

PORT 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PORT 405

Advanced Composition and Conversation (3) Intended to strengthen the advanced student's ability to speak, read, and write in modern Brazilian Portuguese.

Effective: Summer 1981

Prerequisite: PORT 003

PORT 476

Brazilian Literature, The Modern Era (1880 to the Present) (3) A survey of the major texts of Brazilian literature from romanticism to the present.

Effective: Summer 1991

Prerequisite: PORT 003

PORT 480

The Brazilian Novel (3) A survey of the Brazilian novel from its origins to the present.

Effective: Spring 1993

Prerequisite: PORT 003 PORT 405

PORT 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

PORT 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

PORT 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

PORT 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

PORT 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RL ST 001 (GH;US;IL)

Introduction to World Religions (3) An historical and comparative survey of the principal beliefs and practices of the world's major religions.

Effective: Summer 2005

RL ST 003 (ASIA 003) (GH;US;IL)

Introduction to the Religions of the East (3) Religious experience, thought, patterns of worship, morals, and institutions in relation to culture in Eastern religions.

Effective: Spring 2015

RL ST 004 (CAMS 004, J ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationships to culture.

Effective: Summer 2005

RL ST 012 (CAMS 012, J ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

RL ST 044 (CAMS 044) (GH;IL)

Ancient Near Eastern and Egyptian Mythology (3) Survey of major ancient Mediterranean myths, gods, and goddesses in their cultural contexts; influence on later cultures.

Effective: Summer 2005

RL ST 083S (GH)

First-Year Seminar in Religious Studies (3) Critical approaches to the dimensions and directions in Religious Studies.

Effective: Summer 1999

RL ST 090 (CAMS 090, J ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from earliest times (c. 3000 BCE) to the present.

Effective: Fall 2015

RL ST 101 (GH;IL)

Comparative Religion (3) Comparative or historical analysis of religious factors--worship, theology, ethics, scriptures, etc., in two or more religious traditions.

Effective: Summer 2005

RL ST 102 (CAMS 102, HIST 102, J ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

RL ST 103 (ASIA 103) (GH;US;IL)

Introduction to Hinduism (3) Historical development of Hinduism to the present.

Effective: Spring 2015

RL ST 104 (ASIA 104) (GH;US;IL)

Introduction to Buddhism (3) A general survey of the basic doctrine, practice, and historical development of Hinayana and Mahayana Buddhism.

Effective: Spring 2015

RL ST 105 (GH;US;IL)

Buddhism in the Western World (3) A general survey of the development of Buddhism as a religious tradition in the West, focusing especially on America.

Effective: Summer 2005

RL ST 106 (J ST 106) (GH;IL)

Mysticism and Kabbalah (3) A survey of the history, philosophy, and cultural impact of various mystical traditions in relation to world religions.

Effective: Fall 2015

RL ST 107 (GH;US;IL)

Introduction to Islam (3) Community and message of the early movement; development of authoritative structures and traditions; proliferation of sects; theology and creeds; mysticism.

Effective: Spring 2006

RL ST 110 (CAMS 110, J ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.

Effective: Summer 2005

RL ST 111 (CAMS 111, J ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.

Effective: Summer 2005

RL ST 114 (J ST 114) (GH;US;IL)

Modern Judaism (3) Trends in Jewish life and thought since the French revolution; Judaism's responses to the challenge of modernity.

Effective: Summer 2005

RL ST 120 (CAMS 120, J ST 120) (GH)

New Testament (3) Introduction to the history, literature, and religion of early Christianity in its Jewish-Hellenistic setting.

Effective: Spring 2004

RL ST 121 (CAMS 121, J ST 112) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the content of first century Palestinian Judaism.

Effective: Fall 2015

RL ST 122 (CAMS 122, J ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

RL ST 123 (CAMS 123, J ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

RL ST 124 (CAMS 124, J ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.

Effective: Summer 2005

RL ST 125W (GH)

Modern Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the sixteenth century to the present.

Effective: Summer 1995

RL ST 130 (GH)

The Ethics of Western Religion (3) History of theological-social ethics of the Judaeo-Christian tradition.

Effective: Summer 1995

RL ST 131 (PHIL 132) (GH)

Introduction to Bioethics (3) Studies questions of ethics in relation to biotechnology research and implementation, genetic engineering, medicine, animal and human rights.

Effective: Spring 2003

RL ST 132W

Sects and Cults (3) The origins, beliefs, and practices of new or dissenting religious groups and their relationship to the dominant religious culture.

Effective: Spring 1994

RL ST 134 (CAMS 134) (GH;IL)

Archaeology of Biblical Israel (3) Archaeology of Biblical Israel from 1200 B.C.E. to c. 640 C.E.; relationship between archaeological and textual evidence.

Effective: Fall 2015

RL ST 137 (WMNST 137, J ST 137) (GH;US;IL)

Women and Religion (3) Jewish and Christian religious views on womanhood; thought and lives of important religious

women; and feminist understandings of these.

Effective: Fall 2012

Prerequisite: third-semester standing

RL ST 140Y (AM ST 140Y) (GH;US)

Religion in American Life and Thought (3) The function, contributions, tensions, and perspectives of religion in American culture.

Effective: Summer 2005

RL ST 145 (AF AM 145) (GH;US;IL)

African American Religions and Spirituality (3) History and significance of the religious dimension of the Black American struggle for equality from enslavement to the contemporary period.

Effective: Spring 2015

RL ST 146 (AF AM 146) (GH;US)

The Life and Thought of Martin Luther King, Jr. (3) A survey of the civil rights leader including his religious beliefs, intellectual development, and philosophy for social change.

Effective: Spring 2013

RL ST 147 (AF AM 147) (GH;US)

The Life and Thought of Malcolm X (3) The life of Malcolm X/El Hajj Malik El Shabazz (1925-1965) and his social, political, economic, and moral thought.

Effective: Fall 2013

RL ST 153 (CAMS 153, J ST 153) (GH;IL)

Dead Sea Scrolls (3) Examines the discovery, contents, and interpretations of the Dead Sea Scrolls, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

RL ST 160 (CAMS 160, J ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.

Effective: Summer 2014

RL ST 165 (ARAB 165, HIST 165) (IL)

Introduction to Islamic Civilization (3) Islamic history, culture, religious life c.600-1500 C.E.

Effective: Spring 2006

RL ST 181 (ASIA 181) (IL)

Introduction to the Religions of China and Japan (3) A survey of the history, philosophy, and cultural impact of the major Far Eastern religions: Confucianism, Taoism, Buddhism, and Shinto.

Effective: Spring 2015

RL ST 190 (J ST 190, HIST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.

Effective: Summer 2015

RL ST 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1995

RL ST 235 (HIST 235, J ST 235) (US;IL)

The Church and the Jews (3) Examination of the relationship between Western church and the Jews from the First Century to Enlightenment.

Effective: Spring 2006

RL ST 280 (WMNST 280, J ST 280) (GH;IL)

WOMEN AND JUDAISM (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.

Effective: Spring 2006

RL ST 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

RL ST 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

RL ST 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

RL ST 400

Theories of Religion (3) Comparative and interdisciplinary study of two or more systematic theories of religion: anthropological, psychological, sociological, philosophical/theological.

Effective: Fall 1983

Prerequisite: 6 credits in religious studies or seventh-semester standing

RL ST 407Y (HIST 409Y, J ST 409Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.

Effective: Fall 2015

RL ST 408 (US;IL)

Hindu Studies (3) Special topics in Hindu studies.

Effective: Summer 2005

Prerequisite: 3 credits in religious studies

RL ST 409 (US;IL)

Buddhist Studies (3) Special topics in Buddhist studies.

Effective: Spring 2006

Prerequisite: 3 credits in religious studies

RL ST 410 (HIST 410, J ST 410) (US;IL)

Jews in the Medieval World (3) Trends in medieval Jewish society under Islam and Western Christendom.

Effective: Spring 2006

RL ST 411 (J ST 411) (US;IL)

Jewish Studies (3) Study of the life and thought of a particular period or movement in the history of Judaism.

Effective: Spring 2006

Prerequisite: 3 credits in religious studies

RL ST 412 (J ST 412)

American Judaism (3) The development of Jewish religion and culture in America from the colonial era to the present.

Effective: Summer 1999

Prerequisite: HEBR 010 or J ST 010

RL ST 420

Major Christian Thinkers (3) Systematic inquiry into the religious thought of one or more Christian thinkers, such as Paul, Augustine, Luther, Calvin, Kierkegaard, or Tillich.

Effective: Fall 1983

Prerequisite: 3 credits in religious studies

RL ST 422 (AM ST 422, HIST 422) (GH;US)

Religion and American Culture (3 per semester/maximum of 6) Selected topics, problems, or historical movements in American religion. Relation between religion and American culture.

Effective: Fall 2015

Prerequisite: 3 credits of history or religious studies

RL ST 423 (HIST 423) (GH;IL)

Orthodox Christianity: History and Interpretations (3) Examines Orthodox Christianity from origins to present using critical historical analysis of primary and secondary sources.

Effective: Spring 2015

Prerequisite: HIST 105

RL ST 424H (HIST 424H, J ST 424H)

Monotheism and the Birth of the West (3) The birth of monotheism and its relation to social organization, the idea of individuality, and science.

Effective: Fall 2012

Prerequisite: RL ST 004 RL ST 102 RL ST 110 or RL ST 120

RL ST 440Y (US;IL)

The Orthodox Christian Tradition (3) History, culture, and beliefs of the Eastern Orthodox religious tradition with special reference to Russia.

Effective: Summer 2011

Prerequisite: RL ST 004 RL ST 124 RL ST 125 RUS 100 or RUS 110

RL ST 471Y (HIST 471Y) (IL)

Classical Islamic Civilization, 600-1258 (3) Pre-Islamic Arabia; Muhammad; Arab conquest; Islamic beliefs and institutions; literary, artistic, and scientific achievements; relations with Europe; breakdown of unity.

Effective: Spring 2006

RL ST 478 (J ST 478)

Ethics After the Holocaust (3) Explores the philosophical effects of the Holocaust for thinking about the primary question: Is ethics possible?

Effective: Summer 2012

Prerequisite: one course in Jewish Studies or Philosophy

RL ST 483 (ASIA 487) (IL)

Zen Buddhism (3) The development and current state of Zen Buddhist thought and practice.

Effective: Fall 2016

RL ST 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

RL ST 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

RL ST 495

Internship (1-18) Supervised off-campus, non-group instruction, including field experience, practica, or internships.

Effective: Summer 2004

Prerequisite: prior approval of proposed assignment by instructor

RL ST 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

RL ST 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

RL ST 499 (IL)

Foreign Study--Religious Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 083S (GH;US;IL)

First-Year Seminar in Russian (3) Russia's cultural past and present.

Effective: Summer 2005

RUS 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 100 (GH;IL)

Russian Culture and Civilization (3) The Russian people from the tenth century to present times; their literature, arts, music, science, and philosophy. In English.

Effective: Summer 2005

RUS 110 (GH;IL)

Russian Folklore (3) Study of bylina, lyrical and historical songs, folktales, drama, ceremonial poetry, chants, charms, proverbs, and mythology of Russia. In English.

Effective: Summer 2005

RUS 141Y (IL)

Russian Literature in English Translation: 1800-1870 (3) Pushkin, Lermontov, Gogol, the critics, Turgenev, Dostoevsky, Tolstoy. Writing assignments will serve as a major way of exploring subject matter.

Effective: Spring 2006

RUS 142Y (IL)

Russian Literature in English Translation: 1870 to Present (3) Dostoevsky, Tolstoy, Chekhov, Gorky, symbolists, selected Soviet authors. Writing assignments will serve as a major way of exploring subject matter.

Effective: Spring 2006

RUS 143 (GER 143) (GH;IL)

The Culture of Stalinism and Nazism (3) The culture of Stalinist Russia and Nazi Germany in comparative perspective.

Effective: Summer 2005

RUS 196

Independent Studies (1-18) Creative projects, including research and design, that are supervised on an individual basis and that fall outside the scope of formal courses.

Effective: Spring 2004

RUS 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1995

RUS 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 204 (IL)

Intermediate Russian II (4) Intensive practice of Russian reading, writing, listening and speaking; review of Russian grammar.

Effective: Summer 2011

Prerequisite: RUS 003

RUS 214 (IL)

Intermediate Russian III (4) Intensive practice of Russian reading, writing, listening and speaking; review of Russian grammar.

Effective: Summer 2011

Prerequisite: RUS 003

RUS 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

RUS 296

Independent Studies (1-18) Creative projects, including research design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Summer 1986

RUS 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Summer 1986

RUS 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 304 (IL)

Readings in Russian III (3) Extensive reading of contemporary Russian texts, including articles from Soviet press and short fiction.

Effective: Spring 2006

Prerequisite: 6 credits of Russian at the 200 level

RUS 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

RUS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 400 (IL)

Senior Seminar in Russian Culture (3) Senior seminar devoted to topics in Russian culture; conducted in Russian.

Effective: Spring 2006

Prerequisite: RUS 204 RUS 214 RUS 304

RUS 412 (IL)

Russian Translation (3 per semester/maximum of 6) Translation from Russian into English of complex texts from the humanities, social sciences, and technical fields.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 426 (IL)

Dostoevsky (3) Study of representative works by Dostoevsky in the original Russian.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 427 (IL)

Tolstoy (3) Study of representative works by Tolstoy in the original Russian.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 460 (IL)

Linguistic Analysis of Contemporary Russian (3) Detailed study of the phonology, morphology, and syntax of Modern Standard Russian and the major dialects.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

RUS 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

RUS 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

RUS 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

RUS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

S T S 100 (GH)

Science, Technology, and Culture (3) A survey of the development and culture of science, technology, and medicine in world history.

Effective: Spring 2011

S T S 101 (GH)

Modern Science, Technology, and Human values (3) Relationships of science and technology to human aspirations, values, and arts.

Effective: Spring 1996

S T S 107 (PHIL 107) (GH)

Introduction to Philosophy of Technology (3) The character of technology; its relation to human values; philosophical assumptions in its development; and how it transforms the world.

Effective: Spring 2004

S T S 122 (GH)

History of Science I (3) A history of science and culture from Stonehenge to the scientific revolution.

Effective: Fall 2014

S T S 123 (GH)

History of Science II (3) A history of science and culture from the scientific revolution to the present.

Effective: Fall 2014

S T S 233 (PHIL 233) (GH)

Ethics and the Design of Technology (3) Ethics and individual and group decision-making in the design of technology including design projects and specific attention to institutional ethics.

Effective: Spring 2004

S T S 407 (PHIL 407)

Technology and Human Values (3) Interrelationships of twentieth-century technological change and human values. Emphasis on the social and ethical aspects of technological progress.

Effective: Spring 1999

Prerequisite: 9 credits in philosophy including PHIL 107 or 6 credits of philosophy at the 200 level

S T S 428 (HIST 428) (IL)

The Darwinian Revolution (3) The origins and implications of evolutionary theory.

Effective: Spring 2006

Prerequisite: An introductory Science course and a history course.

S T S 432 (PHIL 432)

Medical and Health Care Ethics (3) Examines ethical, political, and social issues in the research, implementation, and practice of medicine, medical technologies, and healthcare.

Effective: Fall 1998

Prerequisite: fifth-semester standing

S T S 433 (PHIL 433)

Ethics in Science and Engineering (3) Ethical issues arising in the practice of science and engineering and their philosophical analysis.

Effective: Fall 1995

S T S 435 (PHIL 435)

The Interrelation of Science, Philosophy, and Religion (3) The historical and transformative interactions between science and Western philosophical and religious views of nature, humanity, and God.

Effective: Spring 1996

SPAN 083S (GH;IL)

First-Year Seminar in Hispanic Literatures and Cultures (3) Introduction to the study of Hispanic literatures and cultures.

Effective: Summer 2005

SPAN 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

SPAN 100A

Intermediate Grammar and Composition for Spanish Bilinguals (3) A review of grammar and practice with composition focusing on needs and problems specific to Spanish-speaking bilinguals.

Effective: Spring 1996

Prerequisite: placement

SPAN 105

Elementary Spanish I for Students in the Agricultural Sciences (4) The course covers basic Spanish, grammar, and oral, aural, and writing skills for students in the Agricultural Sciences. Students who have received high school credit for two or more years of Spanish may not schedule this course for credit without the permission of the instructor. This course does not count toward Spanish majors or the Spanish minor.

Effective: Spring 2014

SPAN 130 (GH;IL)

Iberian Civilization (3) Spanish and Portuguese life from the medieval period to the present; literature, the arts, and contemporary problems in historical perspective.

Effective: Spring 2006

SPAN 131 (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.

Effective: Summer 2005

SPAN 131Y (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.

Effective: Summer 2005

SPAN 132 (AF AM 132, AFR 132) (IL)

Afro-Hispanic Civilization (3) A general introduction to human and cultural elements of African origin in Spanish- and Portuguese-speaking countries of Latin America.

Effective: Spring 2013

SPAN 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1995

SPAN 210

Readings in Iberian Civilization (3) Intermediate level Spanish readings dealing with Iberian life from pre-historic times to the present.

Effective: Spring 1993

Prerequisite: SPAN 200

SPAN 220

Readings in Ibero-American Civilization (3) Intermediate level Spanish readings dealing with Ibero-American life from the pre-conquest to the present.

Effective: Spring 1992

Prerequisite: SPAN 200

SPAN 230 (GH)

Masterpieces of Spanish Literature in English Translation (3) Study of works and authors of international importance; lectures, readings, and written works in English.

Effective: Spring 2003

SPAN 253W

Introduction to Hispanic Literature (3) Introduction to generic distinctions, critical methods, and approaches to Hispanic literature.

Effective: Spring 2008

Prerequisite: SPAN 100 and SPAN 110

SPAN 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

SPAN 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

SPAN 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

SPAN 299 (IL)

Foreign Study--Intermediate Conversational Spanish (3) Grammar review and practice in oral expression and aural comprehension.

Effective: Summer 2005

SPAN 300

Advanced Grammar and Composition Through Reading (3) Development of advanced grammar and composition skills through reading texts by native speakers and adapting their techniques for original compositions.

Effective: Spring 2013

Prerequisite: SPAN 200

SPAN 301

Advanced Writing and Stylistics in Spanish for Spanish Speakers (3) This course will enhance writing proficiency in Spanish of Spanish speaking students by targeting common problems characteristic of Spanish speakers.

Effective: Spring 2008

Prerequisite: SPAN 100A

SPAN 353

Topics in the Cultures of Spain (3) This course offers a comparative study of the literature, artistic manifestations, intellectual traditions, and cultural productions of Spain.

Effective: Fall 2015

Prerequisite: SPAN 200 and SPAN 253W

SPAN 354

Topics in Border Studies (3) This course offers a study of borders as key sites of contact, exchange, conflict, hybridity, and identity production in and across various contexts of Spanish, Latin American, and/or Latina/o culture(s).

Effective: Fall 2015

Prerequisite: SPAN 200 and SPAN 253W

SPAN 355

Topics in the Cultures of Latin America (3) This course offers a comparative study of literatures, artistic manifestations, intellectual traditions, and cultural productions of the Latin American region.

Effective: Fall 2015

Prerequisite: SPAN 200 and SPAN 253W

SPAN 356

Topics in the Cultures of the Americas (3) This course offers a comparative study of the literatures and cultures of the Americas, bringing Latin America into dialogue with the United States (and in some instances Canada).

Effective: Fall 2015

Prerequisite: SPAN 200 and SPAN 253W

SPAN 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

SPAN 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Summer 1999

SPAN 420

Spanish for Business and International Trade (3) Introduction to the Spanish of international business and to the social and cultural norms of negotiation in Spanish-speaking countries.

Effective: Spring 2008

Prerequisite: SPAN 300

SPAN 439

Don Quijote (3) Thorough study of the masterpiece, including its sources, genesis, language, style, success, and influence.

Effective: Spring 2013

Prerequisite: SPAN 253W

SPAN 472

The Contemporary Spanish American Novel (3) The regionalist and social novel since 1910, together with the social background.

Effective: Spring 2013

Prerequisite: SPAN 253W

SPAN 476

Masterpieces of Spanish American Literature (3) Reading, analysis, and discussion of selected major works representative of Spanish American prose and poetry.

Effective: Spring 2013

Prerequisite: SPAN 253W

SPAN 490

Masterpieces of Spanish Prose (3) Reading, analysis, and discussion of selected masterpieces of Spanish novels, short stories, etc.

Effective: Spring 2013

Prerequisite: SPAN 253W

SPAN 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

SPAN 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

SPAN 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

SPAN 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

SPAN 499 (IL)

Foreign Study--Spanish (1-12) Contemporary Spanish life and civilization. Emphasis on post-Civil War period: literature, arts, and sociopolitical problems.

Effective: Summer 2005

Prerequisite: SPAN 100 SPAN 110 or SPAN 120

WMNST 008 (PHIL 008) (GH)

Philosophy and Feminism (3) Explores diverse feminist philosophies of culture and knowledge, and examines gender's role in accounts of reality, truth, morality, and justice.

Effective: Spring 2006

WMNST 083S (GH;US;IL)

First-Year Seminar in Women's Studies (3) Critical approaches to the dimensions and directions in Women's Studies.

Effective: Summer 2005

WMNST 101 (AF AM 101) (GH;US)

The African American Woman (3) The sociological, historical and political experiences of African American women, their roles and contributions to society.

Effective: Spring 2013

WMNST 104 (AM ST 104) (GH;US)

Women and the American Experience (3) Selected aspects of the role of women in United States history and culture from colonial to modern times.

Effective: Summer 2005

WMNST 105 (GS;US)

Living in a Diverse World (3) Critical perspectives on the relationship between social difference and power, emphasizing gender, race, sexuality, class, and disability.

Effective: Spring 2015

WMNST 106 (GH;US;IL)

Representing Women and Gender in Literature, Art and Popular Cultures (3) Interdisciplinary consideration of primary works and scholarship pertaining to women in the humanities and the arts.

Effective: Spring 2013

WMNST 117 (HIST 117) (GH;US;IL)

Women in Modern History (3) Modernization and women: changing images and roles since mid-eighteenth century in the family, workshop, politics, society. Cross-cultural comparisons.

Effective: Summer 2005

WMNST 137 (RL ST 137, J ST 137) (GH;US;IL)

Women and Religion (3) Jewish and Christian religious views on womanhood; thought and lives of important religious women; and feminist understandings of these.

Effective: Fall 2012

Prerequisite: third-semester standing

WMNST 194 (ENGL 194) (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by British, American, and other English-speaking women writers.

Effective: Summer 2005

WMNST 266Y (HIST 266Y) (GH;US)

Sex and Violence in Nineteenth-Century America (3) Historical Overview of Sex and Violence in the Nineteenth-Century United States.

Effective: Spring 2015

WMNST 270 (FR 270)

Race and Gender in Literature Translated from French (3) A critical presentation, taught in English, of changing ideas and values on race and gender in French and Francophone literatures.

Effective: Spring 2005

Prerequisite: FR 351

WMNST 280 (J ST 280, RL ST 280) (GH;IL)

Women and Judaism (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.

Effective: Fall 2006

WMNST 421 (HIST 421) (IL)

The History of European Women (3) European women's lives from the Middle Ages to the present.

Effective: Spring 2013

Prerequisite: WMNST 100 WMNST 106 WMNST 116 or WMNST 117

WMNST 462 (ENGL 462) (US)

Reading Black, Reading Feminist (3) Female identity and its construction in textual representations of gender, class, color, and cultural difference in English-language literatures.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

WMNST 490 (ENGL 490) (US;IL)

Women Writers and Their Worlds (3) American and British literature written from the perspective of women.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

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AERSP 055 (S T S 055) (GN)

Space Science and Technology (3) The science and technology of space exploration and exploitation; physical principles; research and development; history, space policy, and social implications.
Effective: Spring 1994

AFR 105 (EARTH 105) (GN;IL)

Environments of Africa: Geology and Climate Change (3) Significant natural features of Africa as related to human endeavor; case studies include the Nile, climate change, natural resources.
Effective: Spring 2013

AGECO 121 (GN)

Plant Stress: It's Not Easy Being Green (3) The many hazards faced by plants and the dynamic ways that plants respond to these problems are examined.
Effective: Summer 2013

AGECO 134 (R SOC 134) (GN)

Sustainable Agriculture Science and Policy (3) The science, socio-economics, and politics of managing food and fiber production systems. Sustainability implications of current practices and future options.
Effective: Summer 2013

AN SC 300 (GN)

Integrated Animal Biology (3) An integrated study of the biology of domestic animal growth and the underlying cellular, endocrine and immune systems involved.

Effective: Summer 2013

Prerequisite: BIOL 011 and BIOL 012 or BIOL 110 ; at least third-semester standing

ANTH 021 (GN)

Introductory Biological Anthropology (3) The role of human biology and evolution in culture, society, and behavior.
Effective: Spring 2001

ANTH 222 (GS;IL)

Archaeology of Domesticated Animals (3) Biological, ecological and cultural history of animal domestication.
Effective: Summer 2013

ASTRO 001 (GN)

Astronomical Universe (3) The development of modern understanding of the astronomical universe from planets and stars to galaxies and cosmology. Student who have passed ASTRO 005, ASTRO 006, or ASTRO 010 may not take this course for credit.
Effective: Fall 2009

ASTRO 001H (GN)

Astronomical Universe (3) The development of modern understanding of the astronomical universe from planets and stars to galaxies and cosmology. Students who have passed ASTRO 005, ASTRO 006, or ASTRO 010 may not take this course for credit.
Effective: Fall 2009

ASTRO 010 (GN)

Elementary Astronomy (2) Introductory survey of modern astronomy from planets and stars to galaxies and the universe. Students who have passed ASTRO 001, ASTRO 005, or ASTRO 006 may not take this course for credit. Students may not receive General Education credit for ASTRO 010 unless they also take ASTRO 011.
Effective: Fall 2009

ASTRO 011 (GN)

Elementary Astronomy Laboratory (1) Selected experiments and explorations to illustrate major astronomical principles and techniques. Telescopes observations of planets, stars and nebulae.
Effective: Fall 2004
Prerequisite: or concurrent: ASTRO 001 or ASTRO 010

ASTRO 120 (GN)

The Big Bang Universe (3) Exploration of cosmology, birth, and ultimate fate of the universe; origin of galaxies, quasars, and dark matter. For non-science majors.
Effective: Fall 2012
Prerequisite: ASTRO 001 ASTRO 006 or ASTRO 010

ASTRO 130 (GN)

Black Holes in the Universe (3) The predicted properties of black holes and the astronomical evidence for their existence are investigated in the context of modern ideas about space, time, and gravity.
Effective: Spring 2011
Prerequisite: ASTRO 001 ASTRO 006 or ASTRO 010

ASTRO 140 (GN)

Life in the Universe (3) The problem of the existence of life beyond Earth is investigated, drawing from recent research in astronomy and other fields. For non-science majors.
Effective: Fall 2012

Prerequisite: ASTRO 001 ASTRO 005 or ASTRO 010

ASTRO 291 (GN)

Astronomical Methods and the Solar System (3) Physical processes and observational techniques in astronomical systems, characteristics of the sun, planets, and moons.

Effective: Spring 2002

Prerequisite: PHYS 211

ASTRO 292 (GN)

Astronomy of the Distant Universe (3) Observed properties and astrophysical understanding of stars, stellar evolution, galaxies, the large-scale universe, and cosmology.

Effective: Spring 2002

Prerequisite: ASTRO 291

B M B 001 (GN)

Understanding the Bases of Human Disease (3) A broad survey of the molecular and cellular factors that contribute to an understanding of selected human diseases.

Effective: Fall 2004

BI SC 001 (GN)

Structure and Function of Organisms (3) An exploration of how cellular structures and processes contribute to life and how life displays unity even in its diversity. Students who have passed BIOL 027, 110, or 141 may not schedule this course.

Effective: Fall 2004

BI SC 002 (GN)

Genetics, Ecology, and Evolution (3) The study of how living organisms inherit their traits, how plants and animals evolved, and how they now interact. Students who have passed BIOL 033, 133, 110, 220W, or 222 may not schedule this course.

Effective: Spring 2003

BI SC 003 (GN)

Environmental Science (3) Kinds of environments; past and present uses and abuses of natural resources; disposal of human wastes; prospects for the future. Students who have passed BIOL 220 or any other upper-level ecology course in biology may not schedule this course.

Effective: Fall 2003

BI SC 004 (GN)

Human Body: Form and Function (3) A general survey of structure and function--from conception, through growth and reproduction, to death. Students who have passed BIOL 129 and 141 may not schedule this course.

Effective: Spring 2002

BIOL 011 (GN)

Introductory Biology I (3) An introduction to fundamental biological topics (including cells, energy transduction, genetics, evolution, organismal structure/function, ecology) for non-majors biology-related fields.

Effective: Fall 2003

BIOL 012 (GN)

Introductory Biology II (1) Laboratory exercises demonstrating principles of biology.

Effective: Summer 1992

Prerequisite: or concurrent: BIOL 011

BIOL 110 (GN)

Biology: Basic Concepts and Biodiversity (4) A study of the evolution of the major groups of organisms including the fundamental concepts of biology.

Effective: Fall 2003

BIOL 110H (GN)

Honors Biology: Basic Concepts and Biodiversity (4) Honors study of the evolution of the major groups of organisms including the fundamental concepts of biology.

Effective: Spring 2006

BIOL 110L (GN)

Biology: Basic Concepts and Biodiversity (4) A study of the evolution of the major groups of organisms including the fundamental concepts of biology.

Effective: Summer 1994

BIOL 110P (GN)

Biology: Basic Concepts and Biodiversity A study of the evolution of the major groups of organisms including the fundamental concepts of biology.

Effective: Summer 1994

BIOL 110S (GN)

Biology: Basic Concepts and Biodiversity (4) A study of the evolution of the major groups of organisms including the fundamental concepts of biology. This course also fulfills the First-Year Seminar requirements.

Effective: Summer 1999

BIOL 120A (GN;US;IL)

Plants, Places, and People (3) Useful and dangerous plants; historical (archaeological), cultural (ethnological), and economic (anthropocentric) aspects, including structural and chemical characteristics of botanical importance. Students who have passed BIOL (PPATH;S T S) 424 may not schedule this course.

Effective: Spring 2008

BIOL 127 (GN)

Introduction to Plant Biology (3) Cellular structure and organization; physiological processes; classification; reproduction and development; relationship of plant groups. Students who have passed BIOL 240W may not schedule this course.

Effective: Spring 2008

BIOL 129 (GN)

Mammalian Anatomy (4) Anatomy of a mammal, with special reference to that of man. Students who have passed BIOL 421 may not schedule this course.

Effective: Fall 2003

BIOL 129L (GN)

Mammalian Anatomy (4) Anatomy of a mammal, with special reference to that of man. Students who have passed BIOL 421 may not schedule this course.

Effective: Fall 2003

BIOL 129P (GN)

Mammalian Anatomy Anatomy of a mammal, with special reference to that of man. Students who have passed BIOL 421 may not schedule this course.

Effective: Fall 1998

BIOL 133 (GN)

Genetics and Evolution of the Human Species (3) Human heredity and evolution, individual and social implications. The course is for non-majors; students who have passed BIOL 222, 230W, B M B 251 or any upper-division biology course may not schedule this course.

Effective: Spring 2008

BIOL 141 (GN)

Introductory Physiology (3) Explanation of the normal structure and function of the animal body, with special emphasis on human body systems. Students who have passed BIOL 472 may not schedule this course.

Effective: Fall 2003

BIOL 155 (GN)

Introduction to the Biology of Aging (3) Examination of human aging from a biological perspective. Population demographics, physiological and pathological changes, and healthy lifestyles are discussed. Students who have passed BIOL 409 may not schedule this course.

Effective: Spring 2008

BIOL 177 (GN)

Biology of Sex (3) Basic structure and function of the human reproductive system. Physiology of gametogenesis, fertilization, contraception, gestation, parturition, lactation, and sexual behavior.

Effective: Spring 2008

BIOL 220M (GN)

Honors Biology: Populations and Communities (4) Honors study of the major physical, chemical, and biological factors constituting environment and their dynamic interaction with organisms forming ecosystems.

Effective: Summer 2005

Prerequisite: BIOL 110

BIOL 220W (GN)

Biology: Populations and Communities (4) A study of the structures and functions of organismic interactions from simple populations to complex ecosystems. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.

Effective: Fall 2004

Prerequisite: BIOL 110

BIOL 230M (GN)

Honors Biology: Molecules and Cells (4) Honors study of cellular phenomena including molecular genetics and metabolic interactions.

Effective: Summer 2007

Prerequisite: BIOL 110 CHEM 110

BIOL 230W (GN)

Biology: Molecules and Cells (4) A study of cellular phenomena including molecular genetics and metabolic interactions. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.

Effective: Summer 2007

Prerequisite: BIOL 110 CHEM 110

BIOL 240W (GN)

Biology: Function and Development of Organisms (4) A study of development and physiological processes at the organismic level. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.

Effective: Summer 2007

Prerequisite: BIOL 110 CHEM 110

CHEM 001 (GN)

Molecular Science (3) Selected concepts and topics designed to give non-science majors an appreciation for how chemistry impacts everyday life. Students who have received credit for CHEM 003, 101, or 110 may not schedule this course.

Effective: Summer 2007

CHEM 003 (GN)

Molecular Science With Laboratory (3) Selected concepts and topics designed to give non-science majors an appreciation for how chemistry impacts everyday life. Students who have received credit for CHEM 001, 101, or 110 may not schedule this course.

Effective: Summer 2007

CHEM 106 (GN)

Introductory and General Chemistry (5) Introductory chemistry and chemical principles for students who are required to take additional chemistry, e.g., CHEM 112, but are unprepared for CHEM 110. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2013

Prerequisite: satisfactory performance on the Math placement test--i.e. placement beyond the level of MATH 022; or MATH 022 or MATH 041

CHEM 110 (GN)

Chemical Principles I (3) Basic concepts and quantitative relations. Students may take only one course for General Education credit from CHEM 110 or CHEM 101. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B). Students may take only one course for General Education credit from CHEM 101 GN or CHEM 110 GN.

Effective: Summer 2013

Prerequisite: satisfactory performance on the Math placement tests -- i.e. placement beyond the level of MATH 022 ; or CHEM 101 and MATH 022 or MATH 041

CHEM 111 (GN)

Experimental Chemistry I (1) Introduction to quantitative experimentation in chemistry. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2007

Prerequisite: or concurrent: CHEM 110 or CHEM 106

CHEM 112 (GN)

Chemical Principles II (3) Continuation of CHEM 110, including an introduction to the chemistry of the elements. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Spring 2009

Prerequisite: CHEM 110 or CHEM 106

CHEM 112H (GN)

Chemical Principles II - Honors (3) Continuation of CHEM 110, including an introduction to the chemistry of the elements. GN to receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and (CHEM 111; CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B). GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2013

Prerequisite: CHEM 110 or CHEM 106

CHEM 113 (GN)

Experimental Chemistry II (1) Continuation of CHEM 111, with emphasis on topics related to CHEM 112. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2007

Prerequisite: CHEM 111 . Prerequisite or concurrent: CHEM 112

E R M 210 (GN)

Environmental Factors and Their Effect on Your Food Supply (3) An exploration of how urban environmental problems influence our ability to obtain food and natural resources.

Effective: Spring 2000

EARTH 002 (GN)

The Earth System and Global Change (3) An interdisciplinary introduction to the processes, interactions and evolution of the earth's biosphere, geosphere and hydrosphere.

Effective: Fall 2007

EARTH 100 (GN)

Environment Earth (3) Natural processes and their relationship to anthropogenic influences. General principles of global cycles and the role they play in natural hazards, global warming, ozone depletion, etc.

Effective: Fall 2004

EARTH 101 (GN;US)

Natural Disasters: Hollywood vs. Reality (3) Analysis of the causes and consequences of natural disasters; comparison of popular media portrayal of disasters with perspective from scientific research.

Effective: Summer 2005

EARTH 103 (GN)

Earth in the Future: Predicting Climate Change and Its Impacts Over the Next Century (3) Climate predictions for the coming century are utilized to examine potential impacts on regions, sectors of society, and natural ecosystems.

Effective: Summer 2000

EARTH 105 (AFR 105) (GN;IL)

Environments of Africa: Geology and Climate Change (3) Significant natural features of Africa as related to human endeavor; case studies include the Nile, climate change, and natural resources.

Effective: Spring 2013

EARTH 106 (GN)

The African Continent: Earthquakes, Tectonics and Geology (3) Study of earthquakes and seismic waves to learn about the geology and plate tectonics of the African continent.

Effective: Summer 2007

EARTH 150 (GN)

Dinosaur Extinctions and Other Controversies (3) Dinosaur extinctions and other major and controversial events in the history of life.

Effective: Spring 2004

EGEE 101 (MATSE 101) (GN)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Fall 2007

EGEE 101A (MATSE 101A) (GN;IL)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Fall 2007

EGEE 101H (GN)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Summer 2009

EGEE 102 (GN)

Energy Conservation for Environmental Protection (3) Exposure to energy efficiency in day-to-day life to save money and energy, and thereby protect the environment.

Effective: Spring 2000

EGEE 102H (GN)

Energy Conservation for Environmental Protection (3) Exposure to energy efficiency in day-to-day life to save money and energy, and thereby protect the environment.

Effective: Summer 2009

EM SC 121 (GN)

Minerals and Modern Society (3) Production and use of mineral resources in modern society with an emphasis on the interrelationships and their effect on the Earth system.

Effective: Summer 1996

EM SC 150 (S T S 150) (GN;IL)

Out of the Fiery Furnace (3) A history of materials, energy and man, with emphasis on their interrelationships. For nontechnical students.

Effective: Spring 2006

EM SC 240

Energy and Sustainability in Contemporary Culture (3) Critical evaluation of selected media (e.g., books, film) in contemporary culture on topics related to energy and sustainability.

Effective: Summer 2016

ENT 202 (GN)

The Insect Connection (3) An introduction to the diversity of insects and the ways in which they interact with humans and impact our world.

Effective: Summer 1998

GEOG 010 (GN)

Physical Geography: An Introduction (3) Survey and synthesis of processes creating geographical patterns of natural resources, with application of basic environmental processes in resource management.

Effective: Spring 2006

GEOG 110 (GN)

Climates of the World (3) Introduction to climatology, including principal processes of the global climatic system and their variation over space and time.

Effective: Fall 2004

GEOG 115 (GN)

Landforms of the World (3) Distribution of the world's landform features and mineral resources; their characteristics, causes, and significance. Practicum includes correlated field trips and laboratory studies.

Effective: Fall 2004

GEOSC 002 (GN)

Historical Geology (3) History of the earth and its life; fundamentals of evolution, correlation, and paleogeography; practicum includes field trips, study of geologic maps, geologic problems, and fossils, with emphasis on Appalachian geology. (This course includes from one to several field trips for which an additional charge will be made to cover transportation.) This course contains from one to several field trips for which an additional charge will be made to cover transportation.

Effective: Summer 1995

GEOSC 010 (GN)

Geology of the National Parks (3) Introduction to geology, geological change, and environmental hazards, as seen in the National Parks.

Effective: Fall 2003

GEOSC 020 (GN)

Planet Earth (3) Nontechnical presentation of earth processes, materials, and landscape. Practicum includes field trips, study of maps, rocks, and dynamic models, introduction to geologic experimentation. (This course includes from one to several field trips for which an additional charge will be made to cover transportation.) This course contains from one to several field trips for which an additional charge will be made to cover transportation.

Effective: Fall 2003

GEOSC 020L (GN)

Planet Earth (3) Nontechnical presentation of earth processes, materials, and landscape. Practicum includes field trips, study of maps, rocks, and dynamic models, introduction to geologic experimentation. (This course includes from one to several field trips for which an additional charge will be made to cover transportation.)

Effective: Summer 1988

GEOSC 021 (GN)

Earth and Life: Origin and Evolution (3) Introduction to the origin and evolution of life on Earth from the perspective of geologic time and the fossil record. This course contains from one to several field trips for which an additional charge will be made to cover transportation.

Effective: Spring 2002

GEOSC 040 (GN)

The Sea Around Us (3) Introduction to marine sciences and the world ocean, including physical, chemical, biological, and geological aspects of oceanography.

Effective: Fall 2003

GEOSC 040L (GN)

The Sea Around Us (2) Introduction to marine sciences and the world ocean, including physical, chemical, biological, and geological aspects of oceanography.

Effective: Summer 2009

GEOSC 040P (GN)

The Sea Around Us (1) Introduction to marine sciences and the world ocean, including physical, chemical, biological, and geological aspects of oceanography.

Effective: Spring 2009

GEOSC 109H (GN)

Earthquakes and Society (3) Introduction to earthquakes and seismology, and their relationship to society, including monitoring for nuclear weapons and seismic hazards.

Effective: Spring 2007

GEOSC 110H (GN)

The Science of Gemstones (3) An exploration of the geological uses of gems and of the physical and chemical properties underlying their brilliance and color.

Effective: Summer 2002

Prerequisite: high school chemistry and trigonometry

HORT 101 (GN)

Horticultural Science (3) Introduction to horticulture with emphasis on plant domestication, morphology, classification, world food crops, commodities, gardens, propagation, and agrochemicals.

Effective: Summer 2013

INART 050 (GN)

The Science of Music (3) Waves, physics of sound, hearing, musical scales, musical instruments, and room acoustics.

Effective: Spring 2012

MATSE 081 (GN;IL)

Materials in Today's World (3) A survey of the properties, manufacture, and uses of polymers, ceramics and metals in today's world with emphasis on modern developments and new materials.

Effective: Summer 2005

MATSE 101 (EGEE 101) (GN)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Fall 2007

METEO 002 (GN)

Our Changing Atmosphere: Personal and Societal Consequences (3) A survey of meteorology emphasizing how the nature of our lives, individually/societally, depends upon atmospheric structure, quality, and processes.

Effective: Spring 2003

METEO 003 (GN)

Introductory Meteorology (3) Nontechnical treatment of fundamentals of modern meteorology and the effects of weather and climate. A student who took METEO 002 may take the laboratory part of this course for 1 credit only.

Effective: Spring 2003

METEO 101 (GN)

Understanding Weather Forecasting (3) Fundamental principles of synoptic and physical meteorology, satellite and radar imagery, and data analysis in the setting of mid-latitude weather forecasting.

Effective: Fall 2001

MICRB 106 (GN)

Elementary Microbiology (3) Importance of microorganisms in health and disease, agriculture, and industry; descriptive course for students not planning advanced study in microbiology. The combination of MICRB 106 GN and 107 GN must be taken to receive General Education credit in biology. Students must take a combination of MICRB 106 GN and 107 GN to receive General Education credit in biology.

Effective: Spring 2002

MICRB 107 (GN)

Elementary Microbiology Laboratory (1) Selected techniques used to observe, identify and count bacteria; effects of chemical and physical agents on microorganisms. The combination of MICRB 106 GN and 107 GN must be taken to receive General Education credit in biology. Students must take a combination of MICRB 106 GN and 107 GN to receive General Education credit in biology.

Effective: Spring 2002

Prerequisite: or concurrent: MICRB 106

PHYS 001 (GN)

The Science of Physics (3) Historical development and significance of major concepts, with emphasis on the nature of physics and its role in modern life. (For students in non-mathematical fields.)

Effective: Fall 2004

PHYS 150 (GN)

Technical Physics I (3) Elementary treatment of topics in mechanics, heat, wave motion, and sound leading toward an understanding of technical applications.

Effective: Spring 2007

Prerequisite: 1 1/2 units of algebra. Prerequisite or concurrent: MATH 021 or MATH 081

PHYS 150L (GN)

Technical Physics I (3) Elementary treatment of topics in mechanics, heat, wave motion, and sound leading toward an understanding of technical applications.

Effective: Summer 1994

PHYS 150P (GN)

Technical Physics I (3) Elementary treatment of topics in mechanics, heat, wave motion, and sound leading toward an understanding of technical applications.

Effective: Summer 1994

PHYS 151 (GN)

Technical Physics II (3) Elementary treatment of topics in electricity, light, and modern physics leading toward an understanding of technical applications.

Effective: Fall 2001

Prerequisite: PHYS 150

PHYS 151L (GN)

Technical Physics II (3) Elementary treatment of topics in electricity, light, and modern physics leading toward an understanding of technical applications.

Effective: Fall 2001

Prerequisite: PHYS 150

PHYS 211 (GN)

General Physics: Mechanics (4) Calculus-based study of the basic concepts of mechanics: motion, force, Newton's laws, energy, collisions, and rotation.

Effective: Fall 1999

PHYS 211H (GN)

General Physics: Mechanics (4) Calculus-based study of the basic concepts of mechanics: motion, force, Newton's laws, energy, collisions, rotation, and oscillations.

Effective: Spring 2012

PHYS 211L (GN)

General Physics: Mechanics (0-4) Calculus-based study of the basic concepts of mechanics: motion, force, Newton's laws, energy, collisions, and rotation. NOTE: UP offers for 0 credits; Altoona offers for 4 credits.

Effective: Fall 2000

PHYS 211R (GN)

General Physics: Mechanics (4) Calculus-based study of the basic concepts of mechanics: motion, force, Newton's laws, energy, collisions, and rotation.
Effective: Spring 1999

PHYS 212 (GN)

General Physics: Electricity and Magnetism (4) Calculus-based study of the basic concepts of electricity and magnetism.
Effective: Fall 1999
Prerequisite: MATH 140 PHYS 211

PHYS 212H (GN)

General Physics: Electricity and Magnetism (4) Calculus-based study of the basic concepts of electricity and magnetism.
Effective: Summer 2012
Prerequisite: MATH 140 PHYS 211

PHYS 212L (GN)

General Physics: Electricity and Magnetism (0-4) Calculus-based study of the basic concepts of electricity and magnetism. NOTE: UP offers for 0 credits; Altoona offers for 4 credits.
Effective: Fall 2000
Prerequisite: MATH 140 PHYS 211

PHYS 212R (GN)

General Physics: Electricity and Magnetism (4) Calculus-based study of the basic concepts of electricity and magnetism.
Effective: Spring 2000
Prerequisite: MATH 140 PHYS 211

PHYS 213 (GN)

General Physics: Fluids and Thermal Physics (2) Calculus-based study of the basic concepts of fluids and sound, heat, kinetic theory, and entropy.
Effective: Fall 1999
Prerequisite: MATH 140 PHYS 211

PHYS 213L (GN)

General Physics: Fluids and Thermal Physics (0) Calculus-based study of the basic concepts of fluids and sound, heat, kinetic theory, and entropy.
Effective: Fall 1999
Prerequisite: MATH 140 PHYS 211

PHYS 213R (GN)

General Physics: Fluids and Thermal Physics (2) Calculus-based study of the basic concepts of fluids and sound, heat, kinetic theory, and entropy.
Effective: Fall 1999
Prerequisite: MATH 140 PHYS 211

PHYS 214 (GN)

General Physics: Wave Motion and Quantum Physics (2) Calculus-based study of the basic concepts of wave motion, geometrical optics, interference phenomena, photons, wave mechanics, and the structure of matter.
Effective: Spring 2004
Prerequisite: MATH 141 PHYS 211 and PHYS 212

PHYS 214L (GN)

General Physics: Wave Motion and Quantum Physics (0) Calculus-based study of the basic concepts of wave motion, geometrical optics, interference phenomena, photons, wave mechanics, and the structure of matter.
Effective: Spring 2004
Prerequisite: MATH 141 PHYS 211 and PHYS 212

PHYS 214R (GN)

General Physics: Wave Motion and Quantum Physics (2) Calculus-based study of the basic concepts of wave motion, geometrical optics, interference phenomena, photons, wave mechanics, and the structure of matter.
Effective: Spring 2004
Prerequisite: MATH 141 PHYS 211 and PHYS 212

PHYS 250 (GN)

Introductory Physics I (4) Selected topics in mechanics, heat, and sound.
Effective: Fall 2002

Prerequisite: MATH 022 MATH 026 ; or MATH 040 ; or MATH 041 or satisfactory performance on the mathematics proficiency examination

PHYS 250L (GN)

Introductory Physics I (0-4) Selected topics in mechanics, heat, and sound.
Effective: Spring 2010

Prerequisite: MATH 022 MATH 026 ; or MATH 040 ; or MATH 041 or satisfactory performance on the mathematics proficiency examination

PHYS 250P (GN)

Introductory Physics I (0) Selected topics in mechanics, heat, and sound.
Effective: Fall 2002

Prerequisite: MATH 022 MATH 026 ; or MATH 040 ; or MATH 041 or satisfactory performance on the mathematics proficiency examination

PHYS 250R (GN)

Introductory Physics I (4) Selected topics in mechanics, heat, and sound.

Effective: Fall 2002

Prerequisite: MATH 022 MATH 026 ; or MATH 040 ; or MATH 041 or satisfactory performance on the mathematics proficiency examination

PHYS 251 (GN)

Introductory Physics II (4) Selected topics in light, electricity, and magnetism.

Effective: Fall 2002

Prerequisite: PHYS 250

PHYS 251L (GN)

Introductory Physics II (0-4) Selected topics in light, electricity, and magnetism.

Effective: Fall 2010

Prerequisite: PHYS 250

PHYS 251P (GN)

Introductory Physics II (0) Selected topics in light, electricity, and magnetism.

Effective: Fall 2002

Prerequisite: PHYS 250

PHYS 251R (GN)

Introductory Physics II (4) Selected topics in light, electricity, and magnetism.

Effective: Fall 2002

Prerequisite: PHYS 250

R SOC 134 (AGECO 134) (GN)

Sustainable Agriculture Science and Policy (3) The science, socio-economics, and politics of managing food and fiber production systems. Sustainability implications of current practices and future options.

Effective: Summer 2013

S T S 055 (AERSP 055) (GN)

Space Science and Technology (3) The science and technology of space exploration and exploitation; physical principles; research and development; history, space policy, and social implications.

Effective: Spring 1994

S T S 150 (EM SC 150) (GN;IL)

Out of the Fiery Furnace (3) A history of materials, energy, and humans, with emphasis on their interrelationships. For nontechnical students.

Effective: Spring 2006

S T S 201 (GN)

Climate Change, Energy, and Biodiversity (3) Studies of global warming, energy options, and biodiversity; their interrelations as sciences and as societal issues.

Effective: Summer 1994

SOILS 101 (GN)

Introductory Soil Science (3) A study of soil properties and processes and relationships to land use, plant growth, environmental quality, and society.

Effective: Summer 2013

VB SC 211 (GN)

The Immune System and Disease (3) Introduction to the immune system that emphasizes the immune response to infection and consequences of a defective immune response.

Effective: Fall 2007

W F S 209 (GN)

Wildlife and Fisheries Conservation (3) Survey of current and historical issues in wildlife and fisheries conservation; emphasis on vertebrate biodiversity, habitat management and protection, and populations.

Effective: Spring 2016

Prerequisite: BIOL 110

B.A. Degree Requirements: Quantification

125 Courses

CMPSC 101 (GQ)

Introduction to C++ Programming (3) Properties of algorithms, languages, and notations for describing algorithms, applications of a procedure-oriented language to problem solving. A student may receive credit for only one of the following courses: CMPSC 101, 200, 201, 202, 121.

Effective: Fall 2010

Prerequisite: 2 entrance units in mathematics

CMPSC 121 (GQ)

Introduction to Programming Techniques (3) Design and implementation of algorithms. Structured programming. Problem solving techniques. Introduction to a high-level language, including arrays, procedures, and recursion.

Effective: Fall 2010

Prerequisite: MATH 110 or prerequisite or concurrent MATH 140

CMPSC 201 (GQ)

Programming for Engineers with C++ (3) Development and implementation of algorithms in a procedure-oriented language, with emphasis on numerical methods for engineering problems. A student may receive credit for only one of the following courses: CMPSC 101, 102, 200, 201, or 202.

Effective: Spring 2008

Prerequisite: MATH 140

CMPSC 202 (GQ)

Programming for Engineers with FORTRAN (3) Development and implementation of algorithms in a procedure-oriented language, with emphasis on numerical methods for engineering problems. A student may receive credit for only one of the following courses: CMPSC 101, 102, 200, 201, or 202.

Effective: Spring 2008

Prerequisite: MATH 140

CMPSC 203 (GQ)

Introduction to Spreadsheets and Databases (4) Design, use, and programming of spreadsheets and data bases with applications from a range of disciplines.

Effective: Spring 2008

Prerequisite: 2 entrance units in mathematics

EDPSY 101 (GQ)

Analysis and Interpretation of Statistical Data in Education (3) An introduction to quantitative methods in educational research emphasizing the interpretation of frequently encountered statistical procedures.

Effective: Summer 2011

MATH 017 (GQ)

Finite Mathematics (3) Introduction to logic, sets, probability.

Effective: Summer 1988

Prerequisite: 2 units of high school mathematics

MATH 018 (GQ)

Elementary Linear Algebra (3) Linear functions; systems of equations; matrices; linear programming.

Effective: Fall 1999

Prerequisite: 2 units of high school mathematics

MATH 021 (GQ)

College Algebra I (3) Quadratic equations; equations in quadratic form; word problems; graphing; algebraic fractions; negative and rational exponents; radicals.

Effective: Summer 2013

Prerequisite: MATH 004 or satisfactory performance on the mathematics placement examination

MATH 022 (GQ)

College Algebra II and Analytic Geometry (3) Relations, functions, graphs; polynomial, rational functions, graphs; word problems; nonlinear inequalities; inverse functions; exponential, logarithmic functions; conic sections; simultaneous equations.

Effective: Summer 2013

Prerequisite: MATH 021 or satisfactory performance on the mathematics placement examination

MATH 026 (GQ)

Plane Trigonometry (3) Trigonometric functions; solutions of triangles; trigonometric equations; identities.

Effective: Fall 2016

Prerequisite: MATH 021 or satisfactory performance on the mathematics placement examination

MATH 030 (GQ)

Problem Solving (3) Concepts in problem solving; reducing new problems to old ones; techniques for attacking problems; building mathematical models.

Effective: Spring 1994

MATH 035 (GQ)

General View of Mathematics (3) Survey of mathematical thought in logic, geometry, combinatorics, and chance.

Effective: Summer 1992

MATH 036 (GQ)

Insights Into Mathematics (3) Examples of mathematical applications in many areas including voting theory, fair division, apportionment, and Euler and Hamilton circuits.

Effective: Fall 2008

Prerequisite: one unit of algebra or MATH 004

MATH 040 GQ covers all the topics in MATH 004, 021 GQ, 022 GQ, and 026 GQ in one semester, MATH 041 GQ covers the same topics in trigonometry and analytic geometry as MATH 040 GQ. These courses are designed to prepare students for MATH 140 GQ. Students are placed in the appropriate course depending upon the results of the mathematics placement examinations.

MATH 040 (GQ)

Algebra, Trigonometry, and Analytic Geometry (5) Concepts of algebra; equations; inequalities; functions; graphs; polynomial and rational functions; exponential and logarithmic functions; trigonometry; analytic geometry; complex numbers.

Effective: Summer 2013

Prerequisite: satisfactory performance on the mathematics placement examination

MATH 041 (GQ)

Trigonometry and Analytic Geometry (3-4) Straight lines; circles; functions and graphs; graphs of polynomial and rational functions; exponential and logarithmic functions; trigonometry; conic sections.

Effective: Summer 2013

Prerequisite: MATH 021 or satisfactory performance on the mathematics placement examination

MATH 081 (GQ)

Technical Mathematics I (3) Algebraic expressions, equations, systems of equations, trigonometric functions, graphs, solution of triangles, vectors.

Effective: Summer 2013

Prerequisite: MATH 004 or satisfactory performance on the mathematics placement examination

MATH 082 (GQ)

Technical Mathematics II (3) Exponents, radicals, complex numbers, theory of equations, inequalities, half angle and double angle formulas, inverse trigonometric functions, exponential, logarithm, conic sections.

Effective: Summer 1995

Prerequisite: MATH 081

MATH 083 (GQ)

Technical Calculus (4) Limits, derivatives of algebraic functions, implicit differentiation, related rates, applied extrema problems, curve sketching, integration, numerical integration, applications of integration, integration techniques, differential equations.

Effective: Summer 1995

Prerequisite: MATH 082

MATH 097

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

MATH 110 GQ and MATH 140 GQ, 141 GQ are two sequences that discuss differential and integral calculus. They differ in the areas where calculus is applied. The MATH 110 GQ, 111 GQ sequence includes applications from business: the engineering sciences. A student who wants to change from one sequence to another should consult with the chair of the mathematics department.

MATH 110 (GQ)

Techniques of Calculus I (4) Functions, graphs, derivatives, integrals, techniques of differentiation and integration, exponentials, improper integrals, applications. Students may take only one course for credit from MATH 110, 140, 140A, and 140B.

Effective: Fall 2016

Prerequisite: MATH 022 ; MATH 040 ; MATH 041 ; or satisfactory performance on the mathematics placement examination

MATH 111 (GQ)

Techniques of Calculus II (2) Analytic geometry, partial differentiation, maxima and minima, differential equations.

Effective: Summer 1988

Prerequisite: MATH 110

MATH 140 (GQ)

Calculus With Analytic Geometry I (4) Functions, limits; analytic geometry; derivatives, differentials, applications; integrals, applications. Students may only take one course for credit from MATH 110, 140, 140A, 140B, and 140H.

Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 ; MATH 026 and satisfactory performance on the mathematics placement examination ; MATH 040 or MATH 041 ; satisfactory performance on the mathematics placement

MATH 140A (GQ)

Calculus, Analytic Geometry, Algebra, and Trigonometry (6) Review of algebra and trigonometry; analytic geometry; functions; limits; derivatives, differentials, applications; integrals, applications. Students may take only one course for credit from MATH 110, 140, 140A, and 140B.

Effective: Summer 2013

Prerequisite: MATH 022 MATH 026 ; MATH 026 satisfactory performance on the mathematics placement examination ; MATH 040 ; MATH 041 ; satisfactory performance on the mathematics placement

MATH 140B (GQ)

Calculus and Biology I (4) Functions, limits, analytic geometry; derivatives, differentials, applications from biology; integrals, applications from biology. Students may take only one course for credit from MATH 110, 140, 140A, and 140B. Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 ; MATH 026 Satisfactory performance on the mathematics placement examination ; MATH 040 ; MATH 141 ; satisfactory performance on the mathematics placement

MATH 140E (GQ)

Calculus with Engineering Applications I (4) Functions; limits; analytic geometry; derivatives; differentials, applications; integrals, applications. Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 or MATH 040 or MATH 041 or satisfactory performance in the mathematics placement examination

MATH 140G (GQ)

Calculus with Earth and Mineral Sciences Applications I (4) Functions, limits, analytic geometry; derivatives, differentials, applications from the earth and mineral sciences; integrals, applications from the earth and mineral sciences. Students may only take one course for credit from MATH 110, 140, 140A, 140B, 140E, and 140G. Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 or MATH 040 or MATH 041 or satisfactory performance on the mathematics placement examination

MATH 140H (GQ)

Honors Calculus with Analytic Geometry I (4) Honors course in functions, limits; analytic geometry; derivatives, differentials, applications; integrals, applications. Students may only take one course for credit from MATH 110, 140, 140A, 140B, and 140H. Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 or MATH 040 or MATH 041 or satisfactory performance on the mathematics placement examination

MATH 141 (GQ)

Calculus with Analytic Geometry II (4) Derivatives, integrals, applications; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141, 141B, and 141H. Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 141B (GQ)

Calculus and Biology II (4) Derivatives, integrals, applications from biology; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141 and 141B. Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 141E (GQ)

Calculus with Engineering Applications II (4) Integration, applications; sequences and series; parametric equations, application. Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 141G (GQ)

Calculus with Earth and Mineral Sciences Applications II (4) Derivatives, integrals, applications from the earth and mineral sciences; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141, 141B, 141E, and 141G. Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 141H (GQ)

Honors Calculus with Analytic Geometry II (4) Honors course in derivatives, integrals, applications; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141, 141B, and 141H. Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest. Effective: Fall 1992

MATH 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction. Effective: Summer 2005

MATH 200 (GQ)

Problem Solving in Mathematics (3) Fundamental concepts of arithmetic and geometry, including problem solving, number systems, and elementary number theory. For elementary and special education teacher certification candidates only. A student who has passed EDMTH 444 may not take MATH 200 for credit. Effective: Summer 2009

MATH 210 (GQ)

Calculus with Engineering Technology Applications (3) Topics in calculus with an emphasis on applications in

engineering technology.

Effective: Spring 2013

Prerequisite: trigonometry and an introductory course in calculus

MATH 211 (GQ)

Intermediate Calculus and Differential Equations with Applications (3) Topics in ordinary differential equations, linear algebra, complex numbers, Eigenvalue solutions and Laplace transform methods.

Effective: Spring 2013

Prerequisite: MATH 210

MATH 220 (GQ)

Matrices (2-3) Systems of linear equations; matrix algebra; eigenvalues and eigenvectors; linear systems of differential equations.

Effective: Spring 2009

Prerequisite: MATH 110 MATH 140 or MATH 140H

MATH 220H (GQ)

Honors Matrices (2-3) Honors course in systems of linear equations; matrix algebra; eigenvalues and eigenvectors; linear systems of differential equations.

Effective: Spring 2009

Prerequisite: MATH 110 MATH 140 or MATH 140H

MATH 230

Calculus and Vector Analysis (4) Three-dimensional analytic geometry; vectors in space; partial differentiation; double and triple integrals; integral vector calculus. Students who have passed either Math 231 or 232 may not schedule Math 230 or 230H for credit.

Effective: Spring 1996

Prerequisite: MATH 141 or MATH 141H

MATH 230H

Honors Calculus and Vector Analysis (4) Honors course in three-dimensional analytic geometry; vectors in space; partial differentiation; double and triple integrals; integral vector calculus. Students who have passed either MATH 231 or 232 may not schedule MATH 230 or 230H for credit.

Effective: Spring 2006

Prerequisite: MATH 141 or MATH 141H

MATH 231

Calculus of Several Variables (2) Analytic geometry in space; partial differentiation and applications. Students who have passed MATH 230 or MATH 230H may not schedule this course.

Effective: Spring 1996

Prerequisite: MATH 141 or MATH 141H

MATH 231H

Honors Calculus of Several Variables (2) Honors course in analytic geometry in space; partial differentiation and applications. Students who have passed MATH 230 or MATH 230H may not schedule this course.

Effective: Summer 2006

Prerequisite: MATH 141 or MATH 141H

MATH 232

Integral Vector Calculus (2) Multidimensional analytic geometry, double and triple integrals; potential fields; flux; Green's, divergence and Stokes' theorems. Students who have passed MATH 230 may not schedule this course for credit.

Effective: Spring 1996

Prerequisite: MATH 231

MATH 250

Ordinary Differential Equations (3) First- and second-order equations; special functions; Laplace transform solutions; higher order equations. Students who have passed MATH 251 may not schedule this course for credit.

Effective: Fall 1988

Prerequisite: MATH 141

MATH 251

Ordinary and Partial Differential Equations (4) First- and second-order equations; special functions; Laplace transform solutions; higher order equations; Fourier series; partial differential equations.

Effective: Fall 1988

Prerequisite: MATH 141 or MATH 141H

MATH 251H

Honors Ordinary and Partial Differential Equations (4) Honors course in first- and second-order equations; special functions; Laplace transform solutions; higher order equations; Fourier series; partial differential equations.

Effective: Summer 2006

Prerequisite: MATH 141 or MATH 141H

MATH 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 1995

MATH 296

Independent Studies (1-18) Creative projects, including nonthesis research, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

MATH 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

MATH 310

Elementary Combinatorics (3) Fundamental techniques of enumeration and construction of combinatorial structures, permutations, recurrences, inclusion-exclusion, permanents, 0, 1- matrices, Latin squares, combinatorial designs.

Effective: Spring 1985

Prerequisite: MATH 220

MATH 310A

Concepts in Combinatorics - Recitation (1) Recitation for MATH 310H - Concepts in Combinatorics.

Effective: Spring 2013

Prerequisite: MATH 220

MATH 310H

Honors Concepts of Combinatorics (3) Honors version of elementary and enumerative combinatorics.

Effective: Spring 2012

Prerequisite: MATH 220

MATH 311M

Honors Concepts of Discrete Mathematics (3) Basic methods of mathematical thinking and fundamental mathematical structures, primarily in the context of numbers, groups, and symmetries.

Effective: Spring 2006

Prerequisite: MATH 141

MATH 311W

Concepts of Discrete Mathematics (3-4) Introduction to mathematical proofs; elementary number theory and group theory. Students who have passed CMPSC 360 may not schedule this course for credit.

Effective: Spring 2007

Prerequisite: MATH 141

MATH 312

Concepts of Real Analysis (3) An introduction to rigorous analytic proofs involving properties of real numbers, continuity, differentiation, integration, and infinite sequences and series.

Effective: Spring 1994

Prerequisite: MATH 141

MATH 312A

Honors Concepts of Real Analysis - Recitation (1) A recitation component to MATH 312H, practice in problem solving.

Effective: Fall 2012

Prerequisite: MATH 140H MATH 311M

MATH 312H

Honors Concepts of Real Analysis (3) Basic methods of mathematical thinking and fundamental structures, primarily in the context of infinite sets, real numbers, and metric spaces.

Effective: Summer 2006

Prerequisite: MATH 141

MATH 315

Foundations of Mathematics (3) A consideration of selected topics in the foundations of mathematics, with emphasis on development of basic meaning and concepts.

Effective: Spring 2007

Prerequisite: MATH 141

MATH 318 (STAT 318)

Elementary Probability (3) Combinatorial analysis, axioms of probability, conditional probability and independence, discrete and continuous random variables, expectation, limit theorems, additional topics. Students who have passed either MATH(STAT) 414 or 418 may not schedule this course for credit.

Effective: Spring 1989

Prerequisite: MATH 141

MATH 319 (STAT 319)

Applied Statistics in Science (3) Statistical inference: principles and methods, estimation and testing hypotheses, regression and correlation analysis, analysis of variance, computer analysis. Students who have passed MATH(STAT) 415 may not schedule this course for credit.

Effective: Spring 1989

Prerequisite: MATH 318 or knowledge of basic probability

MATH 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

MATH 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MATH 401

Introduction to Analysis I (3) Review of calculus, properties of real numbers, infinite series, uniform convergence, power series. Students who have passed Math. 403 may not schedule this course.

Effective: Fall 1983

Prerequisite: MATH 230 or MATH 231

MATH 403

Classical Analysis I (3) Topology of \mathbb{R}^n , compactness, continuity of functions, uniform convergence, Arzela-Ascoli theorem in the plane, Stone-Wierstrass theorem.

Effective: Spring 1996

Prerequisite: MATH 312

MATH 403H

Honors Classical Analysis I (3) Development of a thorough understanding and technical mastery of foundations of classical analysis in the framework of metric spaces.

Effective: Spring 2010

Prerequisite: MATH 311M MATH 312H

MATH 404

Classical Analysis II (3) Differentiation of functions from \mathbb{R}^n to \mathbb{R}^m , implicit function theorem, Riemann integration, Fubini's theorem, Fourier analysis.

Effective: Fall 1985

Prerequisite: MATH 403

MATH 405

Advanced Calculus for Engineers and Scientists I (3) Vector calculus, linear algebra, ordinary and partial differential equations. Students who have passed MATH 411 or 412 may not take this course for credit.

Effective: Spring 1994

Prerequisite: MATH 231 ; MATH 250 or MATH 251

MATH 406

Advanced Calculus for Engineers and Scientists II (3) Complex analytic functions, sequences and series, residues, Fourier and Laplace transforms. Students who have passed MATH 421 may not take this course for credit.

Effective: Spring 1994

Prerequisite: MATH 405

MATH 408

Advanced Calculus (3) Differential and integral calculus of functions of several variables, line and surface integrals, infinite series, series of functions, power series.

Effective: Spring 2007

Prerequisite: MATH 141

MATH 411

Ordinary Differential Equations (3) Linear ordinary differential equations; existence and uniqueness questions; series solutions; special functions; eigenvalue problems; Laplace transforms; additional topics and applications.

Effective: Fall 1983

Prerequisite: MATH 230 or MATH 231 ; MATH 250 or MATH 251

MATH 412

Fourier Series and Partial Differential Equations (3) Orthogonal systems and Fourier series; derivation and classification of partial differential equations; eigenvalue function method and its applications; additional topics.

Effective: Spring 2009

Prerequisite: MATH 230 ; MATH 250 or MATH 251

MATH 414 (STAT 414)

Introduction to Probability Theory (3) Probability spaces, discrete and continuous random variables, transformations, expectations, generating functions, conditional distributions, law of large numbers, central limit theorems. Students may take only one course from MATH(STAT) 414 and 418 for credit.

Effective: Fall 2001

Prerequisite: MATH 230 or MATH 231

MATH 415 (STAT 415)

Introduction to Mathematical Statistics (3) A theoretical treatment of statistical inference, including sufficiency, estimation, testing, regression, analysis of variance, and chi-square tests.

Effective: Fall 1989

Prerequisite: MATH 414

MATH 416 (STAT 416)

Stochastic Modeling (3) Review of distribution models, probability generating functions, transforms, convolutions, Markov chains, equilibrium distributions, Poisson process, birth and death processes, estimation.

Effective: Spring 1984

Prerequisite: MATH 318 or MATH 414 ; MATH 230

MATH 417

Qualitative Theory of Differential Equations (3) Linear differential equations, stability of stationary solutions, ordinary bifurcation, exchange of stability, Hopf bifurcation, stability of periodic solutions, applications.

Effective: Spring 2009

Prerequisite: MATH 220 ; MATH 250 or MATH 251

MATH 418 (STAT 418)

Introduction to Probability and Stochastic Processes for Engineering (3) Introduction to probability axioms, combinatorics, random variables, limit laws, and stochastic processes. Students may take only one course from MATH(STAT) 414 and 418 for credit.

Effective: Fall 2011

Prerequisite: MATH 230 or MATH 231

MATH 419 (PHYS 419)

Theoretical Mechanics (3) Principles of Newtonian, Lagrangian, and Hamiltonian mechanics of particles with applications to vibrations, rotations, orbital motion, and collisions.

Effective: Spring 2007

Prerequisite: MATH 230 or MATH 231 ; MATH 250 or MATH 251 ; PHYS 212 PHYS 213 and PHYS 214

MATH 421

Complex Analysis (3) Infinite sequences and series; algebra and geometry of complex numbers; analytic functions; integration; power series; residue calculus; conformal mapping, applications.

Effective: Summer 1993

Prerequisite: MATH 230 MATH 232 or MATH 405 ; MATH 401 or MATH 403

MATH 425

Introduction to Operations Research (3) Nature of operations research, problem formulation, model construction, deriving solution from models, allocation problems, general linear allocation problem, inventory problems.

Effective: Spring 2012

Prerequisite: MATH 141 and MATH 220

MATH 426

Introduction to Modern Geometry (3) Plane and space curves; space surfaces; curvature; intrinsic geometry of surfaces; Gauss-Bonnet theorem; covariant differentiation; tensor analysis.

Effective: Spring 1994

Prerequisite: MATH 401 or MATH 403

MATH 427

Foundations of Geometry (3) Euclidean and various non-Euclidean geometries and their development from postulate systems. Students who have passed MATH 427 may not schedule MATH 471.

Effective: Spring 1994

Prerequisite: MATH 230 or MATH 231

MATH 428

Geometry for Teachers (1) Research in mathematics education using ideas from Euclidean and non-Euclidean geometry. Students who have passed MATH 471 may not schedule MATH 427.

Effective: Spring 2007

Prerequisite: MATH 311W . Prerequisite or concurrent: MATH 427

MATH 429

Introduction to Topology (3) Metric spaces, topological spaces, separation axioms, product spaces, identification spaces, compactness, connectedness, fundamental group.

Effective: Spring 1994

Prerequisite: MATH 311W

MATH 430

Linear Algebra and Discrete Models I (3) Vector spaces, linear transformations, matrices determinants, characteristic values and vectors, systems of linear equations, applications to discrete models.

Effective: Spring 2010

Prerequisite: MATH 220

MATH 431

Linear Algebra and Discrete Models II (3) Vector spaces and linear transformations, matrices, determinants, characteristic values and vectors, systems of linear equations, applications to discrete models.

Effective: Spring 2007

Prerequisite: MATH 430

MATH 435

Basic Abstract Algebra (3) Elementary theory of groups, rings, and fields. Students who have passed MATH 435 may not schedule MATH 470.

Effective: Spring 2010

Prerequisite: MATH 311W or MATH 315

MATH 436

Linear Algebra (3) Vector spaces and linear transformations, canonical forms of matrices, elementary divisors, invariant factors; applications. Students who have passed MATH 436 may not schedule MATH 441.

Effective: Fall 1983

Prerequisite: MATH 311W

MATH 437

Algebraic Geometry (3) Study of curves in the plane defined by polynomial equations $p(x,y) = 0$. Projective equivalence, singular points, classification of cubics.

Effective: Spring 2009

Prerequisite: MATH 230 or MATH 231 ; MATH 311W

MATH 441

Matrix Algebra (3) Determinants, matrices, linear equations, characteristic roots, quadratic forms, vector spaces. Students

who have passed Math 436 may not schedule this course.

Effective: Fall 1985

Prerequisite: MATH 220

MATH 444

Mathematical Statistics and Applications I (3) Distributions of random variables, special distributions, limiting distributions, sampling, statistical inference, point and interval estimation, orthogonal polynomials, and least squares.

Effective: Spring 2007

Prerequisite: MATH 141

MATH 446

Introduction to Applied Statistics I (3) Descriptive statistics, probability theory, discrete and continuous probability distributions, statistical inferences for means and proportions.

Effective: Spring 2007

Prerequisite: MATH 022 or MATH 040

MATH 447

Introduction to Applied Statistics II (3) Regression, correlation, analysis of variance, contingency tables, nonparametric methods, time series, index numbers.

Effective: Spring 2007

MATH 449

Applied Ordinary Differential Equations (3) Differential and difference equations and their application to biology, chemistry, and physics; techniques in dynamical systems theory.

Effective: Spring 2007

Prerequisite: MATH 250 or MATH 251

MATH 450

Mathematical Modeling (3) Constructing mathematical models of physical phenomena; topics include pendulum motion, polymer fluids, chemical reactions, waves, flight, and chaos.

Effective: Spring 2007

Prerequisite: MATH 315 and MATH 430 or MATH 405 or MATH 412

MATH 451 (CMPSC 451)

Numerical Computations (3) Algorithms for interpolation, approximation, integration, nonlinear equations, linear systems, fast FOURIER transform, and differential equations emphasizing computational properties and implementation. Students may take only one course for credit from MATH 451 and 455.

Effective: Spring 2008

Prerequisite: 3 credits of programming; MATH 230 or MATH 231

MATH 455 (CMPSC 455)

Introduction to Numerical Analysis I (3) Floating point computation, numerical rootfinding, interpolation, numerical quadrature, direct methods for linear systems. Students may take only one course for credit from MATH 451 and MATH 455.

Effective: Spring 2008

Prerequisite: CMPSC 201 CMPSC 202 or CMPSC 121 ; MATH 220 ; MATH 230 or MATH 231

MATH 456 (CMPSC 456)

Introduction to Numerical Analysis II (3) Polynomial and piecewise polynomial approximation, matrix least squares problems, numerical solution of eigenvalue problems, numerical solution of ordinary differential equations.

Effective: Spring 2008

Prerequisite: MATH 455

MATH 457

Introduction to Mathematical Logic (3) Propositional logic, first-order predicate logic, axioms and rules of inference, structures, models, definability, completeness, compactness.

Effective: Summer 2011

Prerequisite: MATH 311W ; 3 additional credits in philosophy

MATH 461 (PHYS 461)

Theoretical Mechanics (3) Continuation of Math.(Phys.) 419. Theoretical treatment of dynamics of a rigid body, theory of elasticity, aggregates of particles, wave motion, mechanics of fluids.

Effective: Fall 1986

Prerequisite: MATH 419

MATH 465

Number Theory (3) Elements, divisibility of numbers, congruences, residues, and forms.

Effective: Spring 2009

Prerequisite: MATH 311W

MATH 467 (CMPSC 467)

Factorization and Primality Testing (3) Prime sieves, factoring, computer numeration systems, congruences, multiplicative functions, primitive roots, cryptography, quadratic residues. Students who have passed MATH 465 may not schedule this course.

Effective: Spring 1995

Prerequisite: MATH 311W

MATH 468

Mathematical Coding Theory (3) Shannon's theorem, block codes, linear codes, Hamming codes, Hadamard codes, Golay codes, Reed-Muller codes, bounds on codes, cyclic codes.

Effective: Fall 1983

Prerequisite: MATH 311W ; advanced calculus

MATH 470

Algebra for Teachers (3) An introduction to algebraic structures and to the axiomatic approach, including the elements of linear algebra. Designed for teachers and prospective teachers. Students who have passed Math 435 may not schedule this course.

Effective: Fall 1988

Prerequisite: MATH 311W

MATH 471

Geometry for Teachers (4) Problem solving oriented introduction to Euclidean and non-Euclidean geometries; construction problems and geometrical transformations via "Geometer's Sketchpad" software. Intended primarily for those seeking teacher certification in secondary mathematics. Students who have passed MATH 427 may not schedule this course.

Effective: Spring 1996

Prerequisite: MATH 311W

MATH 475W (US;IL)

History of Mathematics (3) A global survey of the history of mathematics as viewed as a human response to cultural, political, economic, and societal pressures.

Effective: Spring 2012

Prerequisite: MATH 315 or MATH 311W

MATH 479 (PHYS 479)

Special and General Relativity (3) Mathematical description, physical concepts, and experimental tests of special and general relativity.

Effective: Spring 2007

Prerequisite: PHYS 237 PHYS 400 PHYS 419 ; MATH 250 or MATH 251 ; MATH 230 or MATH 231

MATH 482

Mathematical Methods of Operations Research (3) Survey of linear and nonlinear programming; mathematics of optimization; queues; simulation.

Effective: Spring 2007

Prerequisite: MATH 220 MATH 230 STAT 301

MATH 484

Linear Programs and Related Problems (3) Introduction to theory and applications of linear programming; the simplex algorithm and newer methods of solution; duality theory.

Effective: Spring 1987

Prerequisite: MATH 220 ; MATH 230 or MATH 231

MATH 485

Graph Theory (3) Introduction to the theory and applications of graphs and directed graphs. Emphasis on the fundamental theorems and their proofs.

Effective: Spring 1987

Prerequisite: MATH 311W

MATH 486

Mathematical Theory of Games (3) Basic theorems, concepts, and methods in the mathematical study of games of strategy; determination of optimal play when possible.

Effective: Spring 2006

Prerequisite: MATH 220

MATH 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 1995

MATH 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

MATH 495

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Spring 2007

Prerequisite: prior approval of proposed assignment by instructor

MATH 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

MATH 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

MATH 498

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

MATH 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PHIL 012 (GQ)

Symbolic Logic (3) Formal logical structures of propositions and arguments; mechanical tests and proof techniques for logically necessary truth and deductive validity.

Effective: Fall 1998

STAT 100 (GQ)

Statistical Concepts and Reasoning (3) Introduction to the art and science of decision making in the presence of uncertainty.

Effective: Summer 1988

STAT 200 (GQ)

Elementary Statistics (4) Descriptive statistics, frequency distributions, probability, binomial and normal distributions, statistical inference, linear regression, and correlation.

Effective: Fall 2014

Prerequisite: Placement into MATH 021 or higher

STAT 240 (GQ)

Introduction to Biometry (3) Statistical analysis, sampling, and experimentation in the agricultural sciences; data collection, descriptive statistics, statistical inference, regression, one factor AOV, probability. Students may take only one course from STAT 200, 220, 240, 250 for credit.

Effective: Fall 2014

Prerequisite: Placement into MATH 021 or higher

STAT 250 (GQ)

Introduction to Biostatistics (3) Statistical analysis and interpretation of data in the biological sciences; probability; distributions; statistical inference for one- and two-sample problems.

Effective: Fall 2014

Prerequisite: Placement into MATH 021 or higher

STAT 301 (GQ)

Statistical Analysis I (3) Probability concepts; nature of statistical methods; elementary distribution and sampling theory; fundamental ideas relative to estimation and testing hypotheses.

Effective: Summer 1988

Prerequisite: 3 credits of calculus

B.A. Degree Requirements: Social and Behavioral Sciences

578 Courses

AF AM 100 (GS;US)

Living While Black: Themes in African American Thought and Experience (3) What it means to be Black in America by engaging with questions about identity and authenticity, freedom and unfreedom, radicalism and reform, gender and sexuality, and the role of music in African American life.

Effective: Spring 2015

AF AM 103 (SOC 103, WMNST 103) (US)

Racism and Sexism (3) Critical analysis of the structure of race and gender in the contemporary United States.

Effective: Spring 2013

AF AM 210 (HIST 210) (GH;US)

Freedom's First Generation: African American Life and Work, 1865 to World War II (3) The course will explore the context and events that shaped African American life over the period 1896-1932.

Effective: Spring 2015

Prerequisite: AF AM 100 HIST 021

AF AM 250 (HIST 250) (GH;IL)

Introduction to the Modern Caribbean (3) A survey course which, explores the historical evolution and emergence of the modern Caribbean.

Effective: Fall 2012

AF AM 409 (SOC 409) (US)

Racial and Ethnic Inequality in America (3) The impact of inequality and discrimination on individual and group identity among various racial and ethnic groups.

Effective: Spring 2013

Prerequisite: SOC 001

AF AM 409U (US)

Racial and Ethnic Inequality in America (3) The impact of inequality and discrimination on individual and group identity among various racial and ethnic groups.

Effective: Fall 2016 Ending: Fall 2016

Prerequisite: SOC 001

AF AM 432 (HIST 432) (IL)

Between Nation and Empire: The Caribbean in the 20th Century (3) An exploration of the political evolution of the Caribbean Region over the course of the 20th Century.

Effective: Fall 2012

Prerequisite: AF AM 250

AF AM 445Y (LER 445Y, PL SC 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

AFR 110 (GS;IL)

Introduction to Contemporary Africa (3) Consideration of influences and forces shaping modern African society; analysis of current local and global problems and issues facing Africa.

Effective: Fall 2012

AFR 110U (GS;IL)

Introduction to Contemporary Africa (3) Consideration of influences and forces shaping modern African society; analysis of current local and global problems and issues facing Africa.

Effective: Fall 2016 Ending: Fall 2016

AFR 440 (PL SC 440, I B 440) (US;IL)

Globalization and Its Implications (3) This course explores the socioeconomic implications of globalization.

Effective: Spring 2013

Prerequisite: AF AM 100 or AFR 110 or PL SC 003 or PL SC 014 or PL SC 020 or PL SC 022

AFR 443 (PL SC 443) (IL)

Ethnic Conflict in Africa (3) This course explores the various causes and impacts of ethnic conflicts in the African context.

Effective: Spring 2013

Prerequisite: AF AM 100 AFR 110 PL SC 001 PL SC 003 PL SC 007 PL SC 014 PL SC 017 PL SC 020 or AFRAS 301

AFR 459 (PL SC 459) (IL)

Culture and World Politics (3) Role of culture in world politics.

Effective: Spring 2013

Prerequisite: PL SC 014

AG BM 101 (GS)

Economic Principles of Agribusiness Decision Making (3) Introduction to economic principles and their application to real world examples of agribusiness management issues.

Effective: Summer 2013

AM ST 106 (COMM 100) (GS)

The Mass Media and Society (3) Mass communications in the United States: organization, role, content, and effects of newspapers, magazines, television, radio, books, and films.

Effective: Fall 2013

ANTH 001 (GS;US;IL)

Introductory Anthropology (3) Prehistoric and traditional peoples and cultures; traditional customs and institutions compared with those of modern society.

Effective: Summer 2005

ANTH 002 (GS)

Introduction to Archaeology (3) Survey of basic approaches used by archaeologists to interpret basic prehistoric human cultural patterns.

Effective: Spring 2000

ANTH 008 (GS;IL)

Aztecs, Mayas, and Incas (3) Comparative survey of the development of the pre-Columbian Latin American civilizations.

Effective: Summer 2005

ANTH 009 (GS;IL)

Rise of Civilization in the Old World (3) Evolution of Old World complex societies, especially the first great civilizations of Mesopotamia, Egypt, China, and the Indus Valley.

Effective: Spring 2006

ANTH 011 (GS;IL)

Introductory North American Archaeology (3) Introduction to archaeology of the North American Indians; sites, methods, and results of research interpreted in cultural history.

Effective: Summer 2005

ANTH 040

Biocultural Evolution (3) Examination of evolutionary models of the development of the human capacity for culture, and of culture as an adaptive mechanism.

Effective: Fall 1986

ANTH 045 (GS;US;IL)

Cultural Anthropology (3) Beginnings of human culture; economic life, society, government, religion, and art among traditional peoples.

Effective: Summer 2005

ANTH 045U (GS;US;IL)

Cultural Anthropology (3) Beginnings of human culture; economic life, society, government, religion, and art among traditional peoples.

Effective: Spring 2016

ANTH 083S (GS)

First-Year Seminar in Anthropology (3) This seminar introduces students to anthropology as a scientific discipline with ties to other social and natural sciences.

Effective: Summer 1999

ANTH 120 (GS;IL)

First Farmers (3) Cross-cultural comparison of the origins of plant and animal domestication and the earliest farming societies.

Effective: Summer 2013

ANTH 146 (GS;US)

North American Indians (3) An introduction to the cultures of the indigenous peoples of North America, north of Mexico, and the effect of contact.

Effective: Spring 2006

ANTH 152

Hunters and Gatherers (3) A comparative study of hunter/gatherer societies using both archaeological and ethnographic evidence.

Effective: Fall 1986

ANTH 221 (GS;IL)

The Ancient Maya (3) The Maya and their neighbors: Origin and Evolution of Classic Maya civilization.

Effective: Spring 2012

Prerequisite: any anthropology course on 100 level or below

ANTH 222 (GS;IL)

Archaeology of Domesticated Animals (3) Biological, ecological and cultural history of animal domestication.

Effective: Summer 2013

ANTH 223 (GS;IL)

European Prehistory (3) The prehistory of European societies from the Upper Palaeolithic to the Iron Age.

Effective: Summer 2013

Prerequisite: 3 credits in 100 level or below ANTH course

ANTH 408

Anthropological Demography (3) Analysis of demographic studies in traditional and very small populations.

Effective: Fall 2003

Prerequisite: 3 credits in anthropology

ANTH 420 (J ST 420)

Archaeology of the Near East (3) Culture of the Near East and India from Paleolithic times through the Bronze Age.

Effective: Summer 1999

Prerequisite: ANTH 008 ANTH 009 ANTH 011 or ANTH 012

ANTH 422

Meso-American Archaeology and Ethnography (3) Survey of ethnohistorical and ethnographic patterns of Meso-American society; origin and development of ancient civilization in Mexico, Guatemala, and Honduras.

Effective: Spring 1999

Prerequisite: ANTH 008 ANTH 009 ANTH 011 or ANTH 012

ANTH 423

The Evolution of American Indian Culture (3) Historic and archaeological sources used to trace American Indian lifestyles from the first immigrants to the period of Euro-American contact.

Effective: Spring 1999

Prerequisite: 3 credits in anthropology

ANTH 424

Andean Ethnology and Archaeology (3) Cultures of the Andes from earliest settlements to Inka Empire; includes discussion of life in modern Andean communities.

Effective: Spring 2002

Prerequisite: ANTH 002 ANTH 045

ANTH 435 (IL)

Ancient Economy (3) The course examines the comparative organization and development of ancient economies in both the Old and New Worlds.

Effective: Summer 2013

ANTH 440

South American Tribal Societies (3) Ethnographic survey of tribal societies in South America. Special emphasis on non-Andean area.

Effective: Fall 1986

ANTH 451

Economic Anthropology (3) Different approaches to the study of the economics of non-Western societies, emphasizing the interrelationships between noneconomic factors and economic behavior.

Effective: Fall 1986

Prerequisite: ANTH 045

ANTH 453

Anthropology of Religion (3) Traditional and modern religions and historical and contemporary religious movements from an anthropological perspective.

Effective: Fall 2003

Prerequisite: ANTH 001 or ANTH 045

ANTH 454 (IL)

Peoples of South Asia (3) This course will cover nation states of Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka and Maldives.

Effective: Summer 2015

Prerequisite: ANTH 001 or ANTH 045

ANTH 455

Global Processes and Local Systems (3) Ethnographic, comparative, historic, evolutionary treatment of global economic, political, and cultural processes and their consequences for local systems.

Effective: Fall 2001

Prerequisite: ANTH 045

ANTH 456

Cultural Ecology (3) Survey of the methods and concepts of cultural ecology, focusing on the interaction between cultural and geographical systems.

Effective: Fall 1986

Prerequisite: 3 credits in anthropology

ANTH 457 (J ST 457, SOC 457) (US;IL)

Jewish Communities: Identity, Survival, and Transformation in Unexpected Places (3) Examines the global array of smaller Jewish communities that have flourished outside the main urban centers of Jewish settlement.

Effective: Summer 2006

Prerequisite: ANTH 001 or ANTH 045 HEBR 010 J ST 010 SOC 001 SOC 005 SOC 007 SOC 015

ANTH 458

Ethnographic Field Methods (3) Course introduces students to ethnographic field methods, includes student projects and simple analyses that don't require statistical sophistication.

Effective: Spring 2009

Prerequisite: ANTH 045

APLNG 083S (GS;US;IL)

First-Year Seminar in Applied Linguistics (3) Introduction to the application of theories of language to cognition, culture, gender, society, and second language acquisition.
Effective: Summer 2005

APLNG 410

Teaching American English Pronunciation (3) Study and application of principles of North American English phonetics and theories of teaching pronunciation.
Effective: Fall 2001

CAMS 012 (J ST 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.
Effective: Summer 2005

CAS 083S (GS)

First-Year Seminar in Speech Communication (3) Introduction to major theoretical, critical, research and pedagogical issues in human communication.
Effective: Fall 2003

CAS 101 (GS)

Introduction to Human Communication (3) Introduction to major theoretical, critical, research and pedagogical issues in human communication.
Effective: Fall 2003

CAS 202 (GS)

Introduction to Communication Theory (3) Survey of human communication studies in relational, interpersonal, group, organization, intercultural, health, technology and communication systems.
Effective: Spring 2003

CAS 450W

Group Communication Theory and Research (3) Selected theories of problem solving through group discussion emphasizing participation and leadership.
Effective: Spring 2003
Prerequisite: CAS 100 or CAS 250

CAS 475

Studies in Public Address (3) History and criticism of public discourse; intensive analysis of selected public addresses and social movements.
Effective: Spring 2003
Prerequisite: CAS 100

CC 200

Introduction to Corporate Communication (3) Introduces fundamental concepts, theories, and practices in Corporate Communication and is a lower division gateway to the major.
Effective: Spring 2016
Prerequisite: ENGL 015

CED 155 (GS)

Science, Technology and Public Policy (3) This course will survey the main issues that relate science and technology to public policy.
Effective: Summer 2013

CMLIT 116 (J ST 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.
Effective: Summer 2015

COMM 100 (AM ST 106) (GS)

The Mass Media and Society (3) Mass communications in the United States: organization, role, content, and effects of newspapers, magazines, television, radio, books, and films.
Effective: Fall 2013

COMM 100S (GS)

The Mass Media and Society (3) Mass communications in the United States: organization, role, content, and effects of newspapers, magazines, television, radio, books, and films.
Effective: Fall 2005

COMM 180 (GS)

Survey of Electronic Media and Telecommunications (3) The development of electronic media and telecommunications, emphasizing social, economic, political and global impact.
Effective: Fall 2006

COMM 205 (WMNST 205) (GS;US)

Gender, Diversity and the Media (3) Explores the relationship between media and society through critical analysis of its role in social reality.
Effective: Spring 2015

COMM 401

Mass Media in History (3) Relationship of news media to social, economic, and political developments in the Western world.
Effective: Fall 1986

COMM 403

Law of Mass Communications (3) Nature and theories of law; the Supreme Court and press freedom; legal problems of the mass media.

Effective: Fall 1986

COMM 405

Political Economy of Communications (3) Structure and functions of American and other mass communications systems and their relationship to political and economic systems.

Effective: Spring 2011

Prerequisite: ECON 102

COMM 408 (S T S 408)

Cultural Foundations of Communications (3) Examination of oral, scribal, print, industrial, and electronic cultures; analysis of impact of technology on communications and social structure.

Effective: Spring 2009

Prerequisite: select 3 credits from COMM 100 COMM 110 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W

COMM 320 COMM 370 ; or 3 credits of S T S

COMM 409

News Media Ethics (3) Ethical problems in the practice of journalism; principal public criticisms of news media; case study approach.

Effective: Fall 2006

COMM 410 (IL)

International Mass Communications (3) The role of international media in communication among and between nations and peoples.

Effective: Spring 2014

Prerequisite: select 3 credits from the following COMM 100 COMM 110 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 or COMM 370

COMM 411

Cultural Aspects of the Mass Media (3) The mass media as creators and critics of mass culture in American life; relationships between the media and mass culture.

Effective: Spring 2009

Prerequisite: 6 credits in the arts or the humanities; and 3 credits selected from the following COMM 100 COMM 110 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 or COMM 370

COMM 413

The Mass Media and the Public (3) Nature of mass communications, relationships between mass media and public, media influences on opinion; social pressures on the media.

Effective: Spring 2009

Prerequisite: 3 credits selected from the following: COMM 100 COMM 110 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 or COMM 370

COMM 413W

The Mass Media and the Public (3) Social-level and political theories of the relationships between media and public; media influences on public opinion; social pressure on the media; political communications.

Effective: Spring 2011

Prerequisite: select 3 credits from the following COMM 100 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 or COMM 370 and select 3 credits from the following: COMM 304 COMM 420

COMM 417

Ethics and Regulation in Advertising and Public Relations (3) Ethical issues in practice of advertising and public relations; legal and regulatory issues; case studies.

Effective: Spring 2007

Prerequisite: COMM 320 or COMM 370

COMM 419 (US;IL)

World Media Systems (3) Comparative study of modern mass systems and the evolution and structure of specific countries' systems.

Effective: Spring 2014

Prerequisite: COMM 410 ; and select 6 credits in the arts or the humanities

COMM 419H (US;IL)

World Media Systems (3) Comparative study of modern media systems of mass communications in selected foreign countries.

Effective: Spring 2009

Prerequisite: select 6 credits in the arts or the humanities; and 3 credits from the following: COMM 100 COMM 110 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 or COMM 370

CRIM 406 (CRIMJ 406, SOC 406)

Sociology of Deviance (3) Theory and research concerning behaviors and lifestyles viewed as significant departures from a group's normative expectations.

Effective: Spring 2008

Prerequisite: CRIM 012

CRIMJ 012 (CRIM 012, SOC 012) (GS)

Criminology (3) Explanations and measurement of crime; criminal law; characteristics of criminals and victims; violent, property, white-collar, organized, and sexual crimes.

Effective: Spring 2008

CRIMJ 083S (GS)

First-Year Seminar in Criminal Justice (3) Critical approaches to issues in criminal justice and criminology.

Effective: Spring 2015

CRIMJ 100 (CRIM 100) (GS)

Introduction to Criminal Justice (3) Overview of the criminal justice system, including legal foundations, processing and correction of offenders, extent and types of crime, victims.

Effective: Spring 2008

CRIMJ 406 (SOC 406, CRIM 406)

Sociology of Deviance (3) Theory and research concerning behaviors and lifestyles viewed as significant departures from a group's normative expectations.

Effective: Spring 2008

Prerequisite: CRIMJ 100 and CRIMJ 113 and CRIMJ 230 or permission of program

CRIMJ 412 (SOC 412, CRIM 412)

Crime, Social Control, and the Legal System (3) Legal and extralegal control; public opinion on crime; criminal justice and correctional processes; legal sanctions; control strategies. Field trip.

Effective: Spring 2008

Prerequisite: CRIMJ 012 CRIMJ 013 or SOC 005

CRIMJ 414 (SOC 414, CRIM 414)

Criminal Careers and the Organization of Crime (3) Research on and theory of criminal careers and crime organizations, emphasizing recruitment and disengagement; offender characteristics and lifestyles; policy implications.

Effective: Spring 2008

Prerequisite: CRIMJ 012 or CRIMJ 013 or SOC 005

CRIMJ 439 (PL SC 439)

The Politics of Terrorism (3) Analysis of political terrorism as a violent alternative for peaceful change and traditional warfare in the nuclear age.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or PL SC 014 or permission of program

CRIMJ 451 (CRIM 451) (US)

Race, Crime, and Justice (3) This course focuses on the significance of race, class, and ethnicity to criminal justice processing and criminal offending.

Effective: Spring 2008

Prerequisite: CRIMJ 100

CRIMJ 460

History and Function of Criminal Justice Components (3) Historical development of criminal justice system components (police, courts, corrections) related to formulation and function of the state.

Effective: Spring 2008

CRIMJ 462

Comparative Criminal Justice Systems (3) A comparison of American and selected foreign justice systems to illustrate the variety of possible responses to crime.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or permission of program

CRIMJ 467 (SOC 467, CRIM 467)

Law and Society (3) Law and society studies the social origins of law and legal systems; occupational careers, and decision-making of legal officials.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or CRIMJ 113 or permission of program

E B F 200 (GS)

Introduction to Energy and Earth Sciences Economics (3) Resource use decisions and their effect on local, national, and global development.

Effective: Fall 2015

Prerequisite: ECON 102 and MATH 022 or equivalent

ECON 014 (GS)

Principles of Economics (3) Analysis of the American economy, emphasizing the nature and interrelationships of such groups as consumers, business, governments, labor, and financial institutions. Students who have passed ECON 002 or 004 or are registered in the College of Business Administration may not schedule this course.

Effective: Spring 2003

ECON 083S (GS)

First-Year Seminar in Economics (3) Experiments in microeconomic principles.

Effective: Summer 1999

ECON 102 (GS)

Introductory Microeconomic Analysis and Policy (3) Methods of economic analysis and their use; price determination; theory of the firm; distribution.

Effective: Spring 2011

ECON 104 (GS)

Introductory Macroeconomic Analysis and Policy (3) National income measurement; aggregate economic models; money and income; policy problems.

Effective: Spring 2011

ECON 106

Statistical Foundations for Econometrics (3) Basic statistical concepts used in economics. Topics include probability distributions, expectations, estimation, hypothesis testing, correlation, and simple regression. Students who have completed ECON 306 may not schedule this course.

Effective: Spring 2011

ECON 197

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 1995

ECON 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ECON 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

ECON 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1992

ECON 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ECON 302 (GS)

Intermediate Microeconomic Analysis (3) Allocation of resources and distribution of income within various market structures, with emphasis on analytical tools.

Effective: Spring 2011

Prerequisite: ECON 102

ECON 302H (GS)

Intermediate Microeconomic Analysis (Honors) (3) Allocation of resources and distribution of income within various market structures, with emphasis on analytical tools.

Effective: Spring 2011

Prerequisite: ECON 102 and MATH 110 or MATH 140

ECON 304 (GS)

Intermediate Macroeconomic Analysis (3) Analysis of forces that determine the level of aggregate economic activity.

Effective: Spring 2011

Prerequisite: ECON 104

ECON 304H (GS)

Intermediate Macroeconomic Analysis (Honors) (3) Analysis of forces that determine the level of aggregate economic activity.

Effective: Spring 2011

Prerequisite: ECON 104 and MATH 110 or MATH 140

ECON 315 (GS)

Labor Economics (3) Economic analysis of employment, earnings, and the labor market; labor relations; related government policies.

Effective: Spring 2011

Prerequisite: ECON 102

ECON 323 (GS)

Public Finance (3) Contemporary fiscal institutions in the United States; public expenditures; public revenues; incidence of major tax types; intergovernmental fiscal relations; public credit.

Effective: Spring 2011

Prerequisite: ECON 102

ECON 333 (GS)

International Economics (3) Why nations trade, barriers to trade, balance of payments adjustment and exchange rate determination, eurocurrency markets, and trade-related institutions.

Effective: Spring 2011

Prerequisite: ECON 102 ECON 104 or ECON 014

ECON 342 (GS)

Industrial Organization (3) Industrial concentration, size, and efficiency of business firms, market structure and performance, competitive behavior, public policy and antitrust issues.

Effective: Spring 2011

Prerequisite: ECON 102

ECON 351

Money and Banking (3) Money, credit, commercial and central banking, financial intermediaries, treasury operations, monetary policy. Students who have already taken ECON 451 may not schedule this course.

Effective: Spring 2016
Prerequisite: ECON 104

ECON 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

ECON 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ECON 400M

Honors Seminar in Economics (3-12) Readings, discussion, and oral and written reports on selected topics in economics.

Effective: Fall 2016

Prerequisite: ECON 302 and ECON 304 and fifth-semester standing and admission into the Economics Department Honors Program.

ECON 401

History of Economic Thought (3) Survey of economic ideas from Greco-Roman times to the present.

Effective: Spring 2001

Prerequisite: ECON 302 or ECON 304

ECON 402

Decision Making and Strategy in Economics (3) Development and application of the tools for decision making under uncertainty and for game theoretic analysis of economic problems.

Effective: Fall 2016

Prerequisite: ECON 302 and ECON 106 or SCM 200 or STAT 200

ECON 404W

Current Economic Issues (3) An analytical survey of significant problems of current economic policy and the application of economic analysis to important social issues.

Effective: Spring 1993

Prerequisite: ECON 302 or ECON 304

ECON 412

Labor Economics and Labor Markets: Theory, Evidence, and Policy (3) Advanced topics in labor economics: theory, empirical evidence, and policy.

Effective: Fall 2016

Prerequisite: ECON 306 and ECON 302 or ECON 315

ECON 424

Income Distribution (3) Inequality and poverty in the United States, measurement problems, determinants of inequality, arguments for and against equality, impact of redistributive policies.

Effective: Fall 1992

Prerequisite: ECON 302 ECON 315 or ECON 323

ECON 425

Economics of Public Expenditures (3) Analytic and policy aspects of public expenditure decisions; applications from areas of contemporary public interest.

Effective: Summer 1992

Prerequisite: ECON 302 or ECON 323

ECON 427

Economics of Energy and Energy Security (3) Energy economics studies topics related to the supply, energy markets, and environmental impacts of energy use.

Effective: Spring 2013

Prerequisite: ECON 302

ECON 428

Environmental Economics (3) Environmental pollution, the market economy, and optimal resource allocation; alternative control procedures; levels of environmental protection and public policy.

Effective: Summer 1992

Prerequisite: ECON 302 or ECON 323

ECON 429

Public Finance and Fiscal Policy (3) Analysis of public revenue and expenditure structure primarily at the federal level; federalism; fiscal policy and public debt.

Effective: Fall 1983

Prerequisite: ECON 323 ; ECON 302 or ECON 304

ECON 432

Urban Economics (3) Theories and methods for economic analysis of such urban problems as housing, segregation, government services, and transportation.

Effective: Summer 1992

Prerequisite: ECON 302 or ECON 323

ECON 433

Advanced International Trade Theory and Policy (3) Causes/consequences of trade; effects of tariffs and quotas;

strategic trade policy; political economy of trade restrictions and other topics.

Effective: Summer 1992

Prerequisite: ECON 302 or ECON 333

ECON 434

International Finance and Open Economy Macroeconomics (3) Trade balance movements, exchange rate determination; monetary and fiscal policies in open economies; international policy coordination; the world monetary system.

Effective: Spring 1992

Prerequisite: ECON 304 or ECON 333

ECON 436W (US)

Economics of Discrimination (3) Analysis of the economic characteristics of women and minorities, with examination of race and sex discrimination and related government policies.

Effective: Fall 2007

Prerequisite: ECON 302 or ECON 315

ECON 443

Economics of Law and Regulation (3) An economic analysis of property rights, contractual arrangements, illegal activities, and regulation; competitive problems due to externalities and market failure.

Effective: Summer 1992

Prerequisite: ECON 302 or ECON 342

ECON 444

Economics of the Corporation (3) Coordination and incentive issues within a corporation. Topics include employment contracts, performance incentives and pricing of financial assets.

Effective: Summer 1997

Prerequisite: ECON 302

ECON 445 (H P A 445)

Health Economics (3) Economic analysis of U.S. health care system; planning, organization, and financing; current public policy issues and alternatives.

Effective: Spring 1994

Prerequisite: ECON 302 ECON 315 or ECON 323

ECON 447W

Economics of Sports (3) Examination of economic issues pertaining to professional and collegiate sports, including analysis of industrial organization, labor markets, and local economies.

Effective: Spring 2009

Prerequisite: ECON 302 and ECON 490

ECON 450

The Business Cycle (3) Measurement and theories of the business cycle; stabilization policies; forecasting.

Effective: Summer 1992

Prerequisite: ECON 304 or ECON 351

ECON 451

Monetary Theory and Policy (3) Monetary and income theory; monetary and fiscal policy.

Effective: Winter 1978

Prerequisite: ECON 304 or ECON 351

ECON 463 (IL)

Economic Demography (3) Microeconomics of demographic behavior; interrelationships between demographic and economic factors, in developing and industrialized economies; economic welfare and policy implications.

Effective: Spring 2006

Prerequisite: ECON 302 or ECON 304 ; or 9 credits in demography

ECON 471

Growth and Development (3) Problems of capital formation, institutional considerations, theories of economic growth.

Effective: Fall 2016

Prerequisite: ECON 302 or ECON 304

ECON 472

Transition to Market Economies (3) Economics of transition to a market economy; problems of former Soviet-type economies; privatization, stabilization, and institutional change.

Effective: Fall 2005

Prerequisite: ECON 302 or ECON 304

ECON 480

Mathematical Economics (3) Mathematical techniques employed in economic analysis; formal development of economic relationships.

Effective: Summer 1992

Prerequisite: ECON 302 ECON 304 MATH 110

ECON 489M

Honors Thesis (1-6) No description.

Effective: Spring 1993

Prerequisite: ECON 302 ECON 304 and admission into the departmental honors program

ECON 490

Introduction to Econometrics (3) Use of simple and multiple regression models in measuring and testing economic

relationships. Problems including multicollinearity, heteroskedasticity, and serial correlation.

Effective: Summer 2000

Prerequisite: MATH 110 ECON 390

ECON 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

ECON 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

ECON 495

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1995

Prerequisite: prior approval of proposed assignment by instructor

ECON 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

ECON 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

ECON 499 (IL)

Foreign Study--Economics (2-6) Study in selected countries of economic institutions and current economic problems.

Effective: Spring 2011

Prerequisite: ECON 102 ECON 104

EDPSY 010 (GS)

Individual Differences and Education (3) Relationships between learner differences and physical, cognitive, language, social, and cultural development; emphasis on ethnicity, gender, special needs; schooling implications.

Effective: Summer 2011

EDPSY 450 (PSYCH 404)

Principles of Measurement (3) Scale transformation, norms, standardization, validation procedures, estimation of reliability.

Effective: Summer 2011

Prerequisite: EDPSY 400 or PSYCH 200 or PSYCH 100 ; STAT 200

EDTHP 115A (GS;US)

Competing Rights: Issues in American Education (3) An examination of educational issues relevant to democratic citizenship; emphasis is on understanding the relationship among politics, schools, and society.

Effective: Spring 2006

EDTHP 115S (GS;US)

Competing Rights: Issues in American Education (3) An examination of educational issues relevant to democratic citizenship; emphasis is on understanding the relationship among politics, schools, and society.

Effective: Spring 2006

EDTHP 115U (GS;US)

Competing Rights: Issues in American Education (3) An examination of educational issues relevant to democratic citizenship; emphasis is on understanding the relationship among politics, schools, and society.

Effective: Fall 2016 Ending: Fall 2016

EDTHP 416 (SOC 416) (US)

Sociology of Education (3) The theoretical, conceptual, and descriptive contributions of sociology to education.

Effective: Spring 2006

EM SC 420 (SOC 420, S T S 420)

Energy and Modern Society (3) Technology and economics of energy resources, production, and consumption; environmental factors, exhaustion, new technology.

Effective: Fall 1986

ENVST 100 (GS)

Visions of Nature (3) An interdisciplinary introduction to environmental studies, including perspectives from ethics, economics, public policy, art, literature, history, geology, biology, and ecology.

Effective: Fall 2000

FD SC 105 (S T S 105) (GHA)

Food Facts and Fads (3) Impact on society and the individual of modern food technology, food laws, additives, etc.; historical, current, and futuristic aspects.

Effective: Spring 2004

GEOG 020 (GS;US;IL)

Human Geography: An Introduction (3) Spatial perspective on human societies in a modernizing world; regional examples; use of space and environmental resources; elements of geographic planning.
Effective: Summer 2005

GEOG 030 (GS;IL)

Geographic Perspectives on Sustainability and Human-Environment Systems (3) Introduction to theory, methods, history and contemporary issues in global and regional relationships between human activity and the physical environment.
Effective: Spring 2012

GEOG 040 (GS;IL)

World Regional Geography (3) Introduction to the world as an interdependent community built from unique and independent regions and nations.
Effective: Spring 2012

GEOG 120 (GS;US;IL)

Urban Geography: A Global Perspective (3) Introduction to the geography of the world's cities and urban system.
Effective: Spring 2006

GEOG 123 (GS;IL)

Geography of Developing World (3) Patterns of poverty in poor countries; conventional and non-conventional explanations; focus on solutions; case studies of specific regions.
Effective: Spring 2007

GEOG 124 (GS;IL)

Elements of Cultural Geography (3) Locational analysis of changes in non-Western cultures. Problems of plural societies, economic development, population growth, and settlement.
Effective: Summer 2005

GEOG 126 (GS;US;IL)

Economic Geography (3) The geographic location and organization of economic activities and outcomes at global, national, regional, and local scales.
Effective: Spring 2012

GEOG 128 (GS;IL)

Geography of International Affairs (3) Contemporary international affairs in their geographical setting; geographic elements in the development of national power, political groupings, and international disputes.
Effective: Summer 2005

GEOG 160 (GS)

Mapping Our Changing World (3) Fundamental concepts of GIS, cartography, remote sensing, and GPS in the context of environmental and social problems.
Effective: Spring 2007

GEOG 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.
Effective: Spring 1988

GEOG 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.
Effective: Spring 2001

GEOG 313

Introduction to Field Geography (3) Introduction to the methods and techniques for collecting spatial and environmental data for physical geography and ecological studies.
Effective: Spring 2007
Prerequisite: GEOG 160

GEOG 314 (GN)

Biogeography and Global Ecology (3) Dynamics of plant and animal distributions on global, regional, and local scales; their causes and consequences.
Effective: Spring 2015
Prerequisite: GEOG 010 or BIOL 110 or equivalent

GEOG 323

GIS and Social Theory (3) Critical understanding of how to use GIS and tools of regional analysis in the context of postmodern social theory.
Effective: Spring 2007
Prerequisite: GEOG 160

GEOG 333

Human Dimensions of Natural Hazards (3) An introduction to natural hazards, integrating physical and social science perspectives.
Effective: Fall 2011
Prerequisite: junior or senior standing

GEOG 361

Cartography--Maps and Map Construction (3) The art and science of creating small-scale maps as a medium for communication and research.

Effective: Spring 2007
Prerequisite: GEOG 160

GEOG 362

Image Analysis (3) Introduction to the basic principles of remote sensing, and the analysis of aerial and satellite data.
Effective: Spring 2007
Prerequisite: GEOG 160

GEOG 363

Geographic Information Systems (3) Principles and use of geographic information; emphasis is on data acquisition and techniques for computer-aided analysis.
Effective: Spring 2007
Prerequisite: GEOG 160

GEOG 364

Spatial Analysis (3) Geographic measurement, scaling, and classification; analysis of spatial pattern and structure; geographic covariation and autocorrelation.
Effective: Fall 2008
Prerequisite: STAT 200 and 6 credits in social science

GEOG 411

Forest Geography (3) This course studies processes that control spatial and temporal change in forests.
Effective: Fall 2015
Prerequisite: GEOG 010 GEOG 314 ; or BIOL 220W

GEOG 411W

Forest Geography (3) This course studies processes that control spatial and temporal change in forests.
Effective: Fall 2015
Prerequisite: GEOG 010 GEOG 314 ; or BIOL 220W

GEOG 412W

Climatic Change and Variability (3) Theories and observations of past, present, and future climatic change and variability; introduction to techniques used in climatic change research.
Effective: Spring 2007
Prerequisite: GEOG 110 or METEO 003

GEOG 417

Satellite Climatology (3) A discussion of the application of satellite data to current and planned large-scale climate experiments.
Effective: Spring 2007
Prerequisite: GEOG 362

GEOG 420Y (US;IL)

Comparative Urbanism (3) This course investigates selected urban issues through the lens of comparative urbanism.
Effective: Fall 2011
Prerequisite: GEOG 120 GEOG 160

GEOG 423Y (US)

Historical Geography of North America (3) Exploration, settlement, and changing patterns of human occupancy from the seventeenth century to the 1930s.
Effective: Fall 2011
Prerequisite: GEOG 122 3 additional credits in geography or 6 credits American history

GEOG 424 (US;IL)

Geography of the Global Economy (3) Focus on industrial location theory, factors in industrial location, studies of selected industries and problems of industrial development.
Effective: Spring 2011
Prerequisite: ECON 102 ECON 104 GEOG 126

GEOG 425 (US)

Geography of Race, Class, and Poverty in America (3) This class examines the spatial interactions of race, class and poverty in the United States.
Effective: Fall 2011
Prerequisite: GEOG 126 ; ECON 102 or ECON 104

GEOG 426Y (WMNST 426Y) (US;IL)

Gender Geographies (3) Description and explanation of the links between gender relations and spatial structures.
Effective: Fall 2013
Prerequisite: GEOG 020 or GEOG 126 or GEOG 120 or WMNST 100

GEOG 427 (US;IL)

Urban Historical Geography (3) Study of the development and transformation of the historical urban built environment.
Effective: Spring 2007
Prerequisite: 6 credits in geography humanities or social sciences

GEOG 428 (US)

Political Geography (3) Geographical foundations of political phenomena; significant geographic factors in growth and development of states, boundary problems, population distribution, colonies, and internal and international regional problems.
Effective: Spring 2007

Prerequisite: 6 credits in history or 6 credits in political science

GEOG 428Y (US;IL)

Political Geography (3) Geographical foundations of political phenomena; significant geographic factors in growth and development of states, boundary problems, population distribution, colonies, and internal and international regional problems.

Effective: Spring 2012

Prerequisite: 3 credits human geography (GEOG 020 or 120 or 122 or 123 or 124 or 126 or 128)

GEOG 429 (US;IL)

Geographic Perspectives on Global Urbanization (3) This course reflects critically on a number of issues related to global urbanization, including the culture and political economy of urban space.

Effective: Spring 2012

Prerequisite: GEOG 020 GEOG 126 or GEOG 120

GEOG 430

Human Use of Environment (3) The human use of resources and ecosystems and social causes and consequences of environmental degradation in different parts of the world; development of environmental policy and management strategies.

Effective: Fall 2008

Prerequisite: GEOG 010 or GEOG 020 or GEOG 030 or GEOG 040 or GEOG 130 or permission of the program

GEOG 431

Geography of Water Resources (3) Perspectives on water as a resource and hazard for human society; water resource issues in environmental and regional planning.

Effective: Spring 2007

Prerequisite: 6 credits in geography or natural sciences

GEOG 438W

Human Dimensions of Global Warming (3) Human dimensions of climate change: human causes, human consequences, and policy implications of global warming.

Effective: Spring 2012

Prerequisite: EARTH 002 GEOG 010 or METEO 003 ; GEOG 030

GEOG 444 (AFR 444)

African Resources and Development (3) Ecological and cultural factors in the geography of Africa; natural resources and development.

Effective: Fall 2015

Prerequisite: GEOG 010 or GEOG 020 or GEOG 030 or GEOG 123 or GEOG 124 or GEOG 130 or EARTH 105 or AFR 105 or AFR 110

GEOG 461W

Dynamic Cartographic Representation (3) Theory and practice of mapping and geo-representation in a dynamic media context. Applications in science, policy, travel, and education.

Effective: Spring 2010

Prerequisite: GEOG 361 or GEOG 362 or GEOG 363

GEOG 463

Geospatial Information Management (3) This course examines geospatial data representations and algorithmic techniques that apply to spatially-organized data in digital form.

Effective: Fall 2011

Prerequisite: GEOG 363

GEOG 464

Advanced Spatial Analysis (3) Skills and knowledge for applying quantitative methods to analyze information with spatial distributions.

Effective: Spring 2012

Prerequisite: GEOG 364

GEOG 467

Applied Cartographic Design (3) Project-based map production problems with emphasis on map design and advanced mapping tools in geographic information systems.

Effective: Fall 2011

Prerequisite: GEOG 361

GEOG 468

Geographic Information Systems Design and Evaluation (3) Design and evaluation of Geographic Information Systems and other forms of integrated spatial data systems.

Effective: Spring 2007

Prerequisite: GEOG 363

GEOG 481

Topographic Mapping with Lidar (3) Using airborne topographic lidar to create elevation models for GIS applications.

Effective: Spring 2015

Prerequisite: GEOG 362 or GEOG 480 ; GEOG 160 or GEOG 482 ; or equivalent professional experience

GEOG 482

The Nature of Geographic Information (2) Orientation to the properties of geographic data and the practice of distance learning.

Effective: Summer 2004

Prerequisite: admission to the Master of GIS program or Certificate Program in GIS

GEOG 483

Problem-Solving with GIS (3) How geographic information systems facilitate data analysis and communication to address common geographic problems.

Effective: Summer 2004

Prerequisite: GEOG 482

GEOG 484

GIS Database Development (3) Database design, creation, maintenance, and data integration using desktop GIS software.

Effective: Summer 2004

Prerequisite: GEOG 483

GEOG 485

GIS Programming and Customization (3) Customizing GIS software to extend its built-in functionality and to automate repetitive tasks.

Effective: Fall 2007

Prerequisite: GEOG 363 or GEOG 484 ; CMPSC 101 or equivalent

GEOG 486

Cartography and Visualization (3) Theory and practice of cartographic design emphasizing effective visual thinking and visual communication with geographic information systems.

Effective: Summer 2004

Prerequisite: GEOG 484

GEOG 487

Environmental Applications of GIS (3) Real-world applications of GIS and spatial analysis to investigate a variety of current environmental issues.

Effective: Spring 2010

Prerequisite: GEOG 484

GEOG 488

Acquiring and Integrating Geospatial Data (3) Advanced technical, legal, ethical and institutional problems related to data acquisition for geospatial information systems.

Effective: Summer 2004

Prerequisite: GEOG 484

GEOG 489

GIS Application Development (3) Advanced topics in GIS customization, including the Systems Development Life Cycle, packaging and deployment, and consuming Web services.

Effective: Summer 2004

Prerequisite: GEOG 485

GEOG 495

Internship (1-13) Supervised off-campus, non-group instruction including individual field experience, practicums, or internships. Written and oral critique of activity required.

Effective: Fall 1981

Prerequisite: prior approval of proposed assignment by instructor

GEOG 495B

Geography Teaching Internship (1-10) Supervised undergraduate teaching experience in which students serve as peer tutors, laboratory assistants, or course material developers.

Effective: Summer 2004

GEOG 495C

Internship Supervision and Mentoring (1) Candidates for the Master of GIS degree sponsor a GIS-related internship for students in Penn State's resident undergraduate program.

Effective: Summer 2004

GEOG 495G

Giscience Internship (1-10) Supervised research experience within the Department of Geography's GeoVISTA Center, Gould Center, or an appropriate external agency.

Effective: Spring 2007

Prerequisite: GEOG 160

GEOG 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

GEOG 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

GEOG 498

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1998

H P A 445 (ECON 445)

Health Economics (3) Economic analysis of U.S. health care system; planning, organization, and financing; current public policy issues and alternatives.

Effective: Spring 1994

Prerequisite: ECON 302 ECON 315 or ECON 323

HD FS 129 (GS)

Introduction to Human Development and Family Studies (3) Introduction to psychosocial and family development at all stages of the individual and family life cycle. Students may take only one course for General Education credit from SOC 030 or HD FS 129. Student may take only one course for General Education credits from HD FS 129 GS or SOC 030 GS.

Effective: Fall 2004

HD FS 129S (GS)

Introduction to Human Development and Family Studies (3) Introduction to psychosocial and family development at all stages of the individual and family life cycle.

Effective: Summer 2006

HD FS 229 (GS)

Infant and Child Development (3) Theory, research, and methods of social/behavioral/biological sciences related to developmental processes and intervention during infancy and childhood.

Effective: Fall 2004

HD FS 239 (GS)

Adolescent Development (3) Social, behavioral, and biological development and intervention throughout adolescence.

Effective: Spring 2002

HD FS 249 (GS)

Adult Development and Aging (3) Physiological, psychological, and social development and intervention from young adulthood through old age.

Effective: Spring 2003

HD FS 431 (SOC 431)

Family Disorganization: Stress Points in the Contemporary Family (3) Focuses on divorce, remarriage, incest, family violence as well as problems associated with family formation and parent-child relations.

Effective: Spring 1996

Prerequisite: HD FS 312W ; 6 credits of Human Development and Family Studies psychology sociology

HD FS 434 (SOC 435)

Perspectives on Aging (3) An analysis of the demographic, social, and cultural factors affecting the aged population in American society.

Effective: Fall 2007

Prerequisite: HD FS 312W ; 6 credits in sociology

HD FS 440 (SOC 440)

Family Policy (3) An in-depth examination of family policy.

Effective: Spring 2007

Prerequisite: 3 credits of SOC or HD FS

HD FS 445 (PSYCH 416)

Development Throughout Adulthood (3) Processes of development and change of behavior from early adulthood through old age, emphasizing theory, method, and empirical research.

Effective: Spring 2007

Prerequisite: HD FS 249 or PSYCH 100 ; HD FS 312W or PSYCH 301W ; PSYCH 200 STAT 200 or 3 credits of statistics ; 6 credits in HD FS PSYCH or SOC.

HIST 116 (WMNST 116) (GS;US;IL)

Family and Sex Roles in Modern History (3) Historical perspectives on the Western family since 1500: gender roles, marriage, sexuality, child rearing, and old age; emphasis on United States.

Effective: Spring 2006

HIST 119 (GH;IL)

Gender and History (3) Survey of the development of gender roles in Western societies from the prehistoric era to the early modern period.

Effective: Spring 2008

HIST 120 (GS;IL)

Europe Since 1848 (3) Political, social, and ideological developments; origin and impact of two World Wars; totalitarianism and democracy; changing role in the world.

Effective: Spring 2006

HIST 142 (GS;IL)

History of Communism (3) Marxism; Leninism and evolution of the Soviet Union; formation and development of the Communist bloc; impact of Chinese Communism.

Effective: Spring 2006

HIST 151 (S T S 151) (GS;US)

Technology and Society in American History (3) Development of technology in America from colonial times; its reception and its influence on social, economic, and political life.

Effective: Spring 2006

HIST 155 (GH;US)

American Business History (3) Major developments in the history of business and industry from the colonial period to

the present.

Effective: Spring 2006

HIST 156 (US)

History of the American Worker (3) A study of the American worker from the preindustrial era to the present.

Effective: Spring 2006

HIST 173 (GH;IL)

Vietnam in War and Peace (3) Rise of nationalism and communism; origins of conflict; United States involvement; impact on postwar regional and international politics; contemporary Vietnam.

Effective: Spring 2006

HIST 453

American Environmental History (3) The history of the ways Americans have used and thought about the environment since 1500.

Effective: Summer 2012

Prerequisite: GEOG 030 ; and HIST 020 HIST 021 ; or 6 credits in the humanities or social sciences

HIST 458Y (LER 458Y) (US)

History of Work in America (3) A study of selected problems in the history of work in the United States, especially since 1877.

Effective: Spring 2008

Prerequisite: HIST 021 HIST 156 or LER 100

I B 440 (PL SC 440, AFR 440) (US;IL)

Globalization and Its Implications (3) This course explores the socioeconomic implications of globalization.

Effective: Spring 2013

Prerequisite: AF AM 100 or AFR 110 or PL SC 003 or PL SC 014 or PL SC 020 or PL SC 022

INTAG 100 (GS;IL)

Introduction to International Agriculture (3) Ag in developing countries; contemporary crucial issues in global agriculture; emphasizing hunger and food security.

Effective: Summer 2013

INTST 100 (GS;IL)

Introduction to International Studies (3) An introductory multidisciplinary course designed to familiarize students with critical international issues.

Effective: Summer 2005

INTST 100S (GS;IL)

Introduction to International Studies (3) An introductory multidisciplinary course designed to familiarize students with critical international issues.

Effective: Summer 2005

J ST 012 (CAMS 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

J ST 116 (CMLIT 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.

Effective: Summer 2015

LER 083S (GS)

First-Year Seminar in Labor Studies and Employment Relations (3) Critical approaches to the dimensions and direction in Labor and Employment Relations.

Effective: Spring 2008

LER 100 (GS)

Employment Relations (3) Introductory analysis of the employment relationship and of the interrelated interests of managements, workers, unions, and the public.

Effective: Spring 2008

LER 105

Human Resources in the Workplace (3) Students will study the relationship between the organizations that govern the workplace, and the individuals who populate it.

Effective: Summer 2016

LER 136 (WMNST 136) (US)

Race, Gender, and Employment (3) Employment relations and legislative and policy responses to labor force issues of racial and gender inequality.

Effective: Spring 2008

LER 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Spring 2008

LER 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2008

LER 201 (GS)

Employment Relationship: Law and Policy (3) An examination of basic legal principles underlying the employment relationship and their social, political, and economic bases.

Effective: Spring 2008

LER 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 2008

LER 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Spring 2008

LER 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 2008

LER 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2008

LER 312

Employment Relations to Research Methods in Labor and Employment Relations (3) The objective of this course is to enhance students' abilities to use a range of methodologies to evaluate and conduct research in the field of employment relations and human resource management.

Effective: Fall 2015

LER 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Spring 2008

Prerequisite: prior approval of proposed assignment by instructor

LER 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2008

LER 400 (IL)

Comparative Employment Relations Systems (3) Analysis of structure and elements of employment relations systems in developed and developing areas.

Effective: Spring 2008

Prerequisite: 3 credits in Labor and Employment Relations

LER 401

The Law of Labor-Management Relations (3) Development of Anglo-American law regulating collective bargaining, with emphasis on American labor-management relations under Wagner, Taft-Hartley, and other acts.

Effective: Spring 2008

Prerequisite: 3 credits in Labor and Employment Relations or Political Science

LER 403 (IL)

International Human Resource Studies (3) Course exploring human resource management from an international perspective.

Effective: Spring 2015

Prerequisite: LER 100

LER 409 (OLEAD 409)

Leadership Development: A Life-Long Learning Perspective (3) The course examines the continuing influence of social and environmental factors in shaping leadership and leadership development.

Effective: Spring 2016

Prerequisite: 6th semester standing

LER 424

Employment Compensation (3) Development and management of employee compensation systems.

Effective: Spring 2008

Prerequisite: LER 201 and sixth-semester standing

LER 426

Staffing and Training Strategies in Organizations (3) This course focuses on the theory and practice of human resource staffing and training in organizations.

Effective: Spring 2011

Prerequisite: 3 credits in Labor and Employment Relations (LER) or Human Resources and Employment Relations (HRER)

LER 434

Collective Bargaining and Contract Administration (3) Theory, practice, and economic impact of collective bargaining, including administration of the collective bargaining agreement.

Effective: Spring 2008

Prerequisite: LER 100

LER 435

Labor Relations in the Public Sector (3) Analysis of labor relations problems within different areas of public employment.

Effective: Spring 2008

Prerequisite: 3 credits in Labor and Employment Relations

LER 437

Workplace Dispute Resolution (3) Dispute resolution practices and procedures used in the workplace and employment law settings.

Effective: Spring 2008

Prerequisite: LER 100

LER 444

Workplace Safety and Health: Principles and Practices (3) The role of employees, unions, employers, and government in dealing with work-related safety and health issues.

Effective: Fall 2013

Prerequisite: LER 100 or sixth-semester standing

LER 445Y (AF AM 445Y, PL SC 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

LER 458Y (HIST 458Y) (US)

History of Work in America (3) A study of selected problems in the history of work in the United States, especially since 1877.

Effective: Spring 2008

Prerequisite: HIST 021 HIST 156 or LER 100

LER 460

Human Resources Ethics (3) Ethics of human resources management.

Effective: Fall 2014

Prerequisite: Take one of the following courses: ARMY 402 H P A 460 HM 466 MGMT 341 MGMT 441 NAVSC 402 NURS 432 PSYCH 281 3 credits in Labor and Employment Relations (LER) or Human Resources and Employment Relations (HRER)

LER 464 (OLEAD 464)

Communication Skills for Leaders in Groups and Organizations (3) Theory-and research-based communication skills for leaders dealing with work-related problems in contemporary groups and organizations.

Effective: Spring 2013

LER 465 (OLEAD 465)

Collective Decision Making (3) Application of theories of decision making to work-related issues in groups and organizations requiring collective resolution and action.

Effective: Spring 2013

LER 466 (US)

Labor Union Structure, Administration and Governance (3) Comprehensive analysis of American Labor Unions/Labor Organizations: how structured, administered, and governed as they pursue economic, social, political objectives.

Effective: Spring 2016

Prerequisite: LER 100

LER 472 (WMNST 472)

Work-Life Practices and Policies (3) Explore the causes and consequences of conflicts between work, family, and other life commitments, and how these may be resolved.

Effective: Spring 2008

Prerequisite: 3 credits of LER

LER 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 2008

LER 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 2008

LER 495

Labor Studies Internship (1-12) Supervised practicum in labor relations setting with union, management, or government agency.

Effective: Spring 2008

Prerequisite: prior approval by department

LER 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Spring 2008

LER 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.
Effective: Spring 2008

LER 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2008

LING 001 (GS;US;IL)

The Study of Language (3) A non-technical introduction to the study of human language, and its role in human interaction. Students who have successfully completed LING 100 may not enroll in LING 001.
Effective: Summer 2005

LING 097

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.
Effective: Fall 1992

LING 098

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.
Effective: Fall 1992

LING 100 (GS)

Foundations of Linguistics (3) Systematic study of linguistic structures in a variety of the world's languages; an overview of language, and its organization.
Effective: Spring 2011

LING 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.
Effective: Fall 1992

LING 198

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.
Effective: Fall 1992

LING 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

LING 294

Research Project A1-12) Supervised student activities on research projects identified on an individual or small-group basis.
Effective: Summer 1994

LING 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.
Effective: Fall 1983

LING 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.
Effective: Fall 1992

LING 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

LING 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.
Effective: Summer 1996
Prerequisite: prior approval of proposed assignment by instructor

LING 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.
Effective: Fall 1992

LING 398

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.
Effective: Fall 1992

LING 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

LING 402

Syntax I (3) Principles of grammatical analysis in the generative framework; an overview of syntactic structures across languages.

Effective: Fall 2001

LING 404

Phonology I (3) The analysis of the sound systems of human languages; focus on common phonological processes across languages and on phonetics-phonology interface.

Effective: Fall 2001

LING 429 (PSYCH 426)

Language and Thought (3) Relations between language and cognition; cognitive implications of normal and impaired language development; cognition and bilingualism.

Effective: Spring 2007

Prerequisite: PSYCH 100 LING 001 or LING 100

LING 446 (PSYCH 427)

L1 Acquisition (3) How children learn their first language; psycholinguistic aspects of lexical, syntactic, semantic, and phonological development.

Effective: Spring 2010

Prerequisite: LING 100 or PSYCH 002 or permission of program

LING 447

Bilingualism (3) Explores the social and psychological aspects of bilingualism; topics include languages in contact, transference, maintenance, and loss.

Effective: Fall 2001

LING 448

Sociolinguistics (3) Issues in the study of language in its sociocultural context; analysis of social dialects and speech styles.

Effective: Fall 2001

LING 449

Semantics I (3) The study of meaning in human language; methods of analysis; study of sense, reference, compositionality, quantification, presupposition, and sentence- level meaning.

Effective: Fall 2001

LING 457 (PSYCH 457)

Psychology of Language (3) Overview of psychological research and theory on language processes, including speech perception, word recognition, meaning representation, comprehension, and language acquisition.

Effective: Fall 2014

Prerequisite: PSYCH 100 or LING 100

LING 493

Field Methods (3) Primary linguistic investigation of a language different from English; field work with a native speaker; data gathering; linguistic analysis.

Effective: Fall 2001

LING 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

LING 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

LING 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

LING 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Fall 1983

LING 498

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Fall 1992

LING 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LTNST 300 (WMNST 300) (US)

Latinas in the US: Gender Culture and Society (3) This course examines the historical development, theoretical premises, and political, social, and artistic contributions of Latina feminisms in the United States.

Effective: Spring 2013

Prerequisite: LTNST 100 or WMNST 100

NUTR 111 (HIST 111) (GH;US)

American Food System: History, Technology and Culture (3) A cultural analysis of the evolution of U.S. agricultural production and food consumption patterns, the food industry and food marketing.

Effective: Fall 2013

NUTR 430 (S T S 430) (IL)

Global Food Strategies: Problems and Prospects for Reducing World Hunger (3) Technological, social, and political solutions to providing basic food needs; food resources, population, and the environment; current issues.

Effective: Summer 2005

OLEAD 100 (GS)

Introduction to Leadership (3) This course introduces key leadership concepts and practices based on current theory and research. It is designed to help students to discover the knowledge and skills that are characteristic of effective leaders.

Effective: Summer 2012

OLEAD 409 (LER 409)

Leadership Development: A Life-Long Learning Perspective (3) The course examines the continuing influence of social and environmental factors in shaping leadership and leadership development.

Effective: Spring 2016

Prerequisite: 6th semester standing

OLEAD 464 (LER 464)

Communication Skills for Leaders in Groups and Organizations (3) Theory-and research-based communication skills for leaders dealing with work-related problems in contemporary groups and organizations.

Effective: Spring 2013

OLEAD 465 (LER 465)

Collective Decision Making (3) Application of theories of decision making to work-related issues in groups and organizations requiring collective resolution action.

Effective: Spring 2013

PL SC 001 (GS)

Introduction to American National Government (3) Introduction to development and nature of American political culture, constitutional/structural arrangements, electoral/policy processes; sources of conflict and consensus.

Effective: Spring 2002

PL SC 002

American Public Policy (3) Examination of selected areas of public policy in America. Analysis of policy content, alternatives, and impact.

Effective: Fall 1983

Prerequisite: PL SC 001

PL SC 003 (GS;IL)

Introduction to Comparative Politics (3) Introduction to study of comparative government and politics: normative/empirical theories; government functions in modern societies; representative structures and processes.

Effective: Fall 2007

PL SC 003U (GS;IL)

Introduction to Comparative Politics (3) Introduction to study of comparative government and politics: normative/empirical theories; government functions in modern societies; representative structures and processes.

Effective: Summer 2012

PL SC 007 (GS)

Contemporary Political Ideologies (3) Critical analysis of contemporary political ideologies such as liberalism, conservatism, socialism, anarchism, fascism, feminism, and environmentalism.

Effective: Fall 2004

PL SC 014 (GS;IL)

International Relations (3) Characteristics of modern nation-states and forces governing their international relations; nationalism; imperialism; diplomacy; current problems of war and peace. Credit will not be given for both this course and INT U 200.

Effective: Fall 2007

PL SC 017 (GS)

Introduction to Political Theory (3) Introduction to basic issues in political theory through analysis of selected major political thinkers.

Effective: Spring 2003

PL SC 017W (GS)

Introduction to Political Theory (3) Introduction to basic issues in political theory through analysis of selected major political thinkers.

Effective: Spring 2001

PL SC 020 (GS;IL)

Comparative Politics--Western Europe (3) Comparative analysis of political cultures, interest groups, parties, and decision-making processes in principal Western European political systems.

Effective: Fall 2007

PL SC 022 (GS;IL)

Politics of the Developing Areas (3) The impact of colonialism, nationalism, and development policy on the political culture, structure, and transformation of post-colonial regimes.
Effective: Spring 2010

PL SC 060 (ANTH 060, J ST 060, SOC 060) (GS;IL)

Society and Cultures in Modern Israel (3) An introduction to the society and cultures of the State of Israel from 1948 to the present.
Effective: Summer 2006

PL SC 083S (GS)

First-Year Seminar in Political Science (3) Exploration of current topics of interest in political science, international relations, and/or political theory.
Effective: Summer 1999

PL SC 091

Introduction to Peace and Conflict Studies (3) Introduction to theory and practice concerning major contemporary issues of peace and conflict; includes anthropological, technological, psychological, and economic perspectives.
Effective: Spring 2013

PL SC 110 (GS;US)

Rights in America (3) This course explores the historical and contemporary struggles of particular groups within American society to expand their rights.
Effective: Summer 2006

PL SC 123 (GS;US;IL)

Ethnic and Racial Politics (3) Political movements among United States ethnic and racial groups; government policies on race and ethnicity; comparison to other culturally diverse countries.
Effective: Fall 2007
Prerequisite: PL SC 001 or PL SC 003

PL SC 125

Pennsylvania Government and Politics (3) Pennsylvania political processes; executive, legislative, judicial decision-making, and electoral behavior; selected public policies.
Effective: Fall 1984

PL SC 130 (GS;US)

American Political Campaigns and Elections (3) Methods and strategies of American political campaigns: polls, political consultants, parties, and the media.
Effective: Fall 2007

PL SC 132 (GS;IL)

The Politics of International Intolerance (3) Introductory course emphasizing psychological, historical, and political aspects of global intolerance towards minorities.
Effective: Fall 2007

PL SC 135 (S T S 135) (GS)

The Politics of the Ecological Crisis (3) The political implications of the increasing scarcity of many of the world's resources.
Effective: Spring 2001

PL SC 137

United States Intelligence and Policy Making (3) The policy making process in the United States foreign intelligence and security policy; emphasis on the period following World War II.
Effective: Spring 2001

PL SC 155

Understanding Tyranny (3) Exploration of the rationales, methods, and consequences of highly repressive political regimes through novels, films, and memoirs.
Effective: Summer 1996

PL SC 177 (GS)

Politics and Government in Washington DC (1-3) The course centers on a Spring Break trip to Washington DC, with students meeting on campus before and after the trip.
Effective: Fall 2007

PL SC 197

Special topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.
Effective: Spring 1995

PL SC 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

PL SC 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.
Effective: Summer 1994

PL SC 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis

and which fall outside the scope of formal courses.

Effective: Fall 1983

PL SC 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

PL SC 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PL SC 300H

Introduction to Independent Thesis Research (3) Introduction to research design, principles of social science research, and development on honors theses research proposal.

Effective: Fall 2008

PL SC 306H

Senior Thesis Writing Workshop (1 per semester, maximum of 3) This seminar supports the writing and editing of senior honors theses.

Effective: Fall 2005

PL SC 309

Quantitative Political Analysis (3) Data analysis and statistical applications in political research, including data processing; inferential statistics; contingency analysis; correlation and regression; multivariate analysis.

Effective: Fall 2009

Prerequisite: any 3 credits in political science

PL SC 395

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Summer 1996

Prerequisite: prior approval of proposed assignment by instructor

PL SC 397

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject that may be topical or of special interest.

Effective: Fall 2007

PL SC 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PL SC 403

The Legislative Process (3) Analysis of the policy process within the legislative system; the effects of environmental factors on policy alternatives and legislative decision making.

Effective: Spring 2001

Prerequisite: PL SC 001 or PL SC 003

PL SC 404

Analyzing Public Policy in the American States (3) This course provides students with the tools to empirically evaluate policy proposals and outcomes in the American states.

Effective: Summer 2015

Prerequisite: PL SC 001 PL SC 309

PL SC 405

The American Presidency (3) An examination of the selection methods for, and powers of, the American presidency, as well as other chief executives.

Effective: Fall 1983

Prerequisite: PL SC 001

PL SC 409 (CAS 409)

Democratic Deliberation (3) Explores the theory and practice of democratic deliberation in elections, town meetings, juries, legislatures, and other public institutions.

Effective: Spring 2014

Prerequisite: CAS 137 CAS 175 CAS 201 CAS 202 CAS 216 CAS 250 CAS 272 or PL SC 001 PL SC 017 PL SC 112 PL SC 130

PL SC 410

Strategy and Politics (3) This course examines political behavior using social choice theory and game theory.

Effective: Spring 2013

Prerequisite: PL SC 001 PL SC 003 or PL SC 014

PL SC 411W

Principles of International Cooperation (3) An exploration of the forces that make conflict, or cooperation, more likely in international relations.

Effective: Summer 2006

Prerequisite: PL SC 014

PL SC 412

International Political Economy (3) The transnational politics of trade, investment, aid, raw materials, and the environment; nation-states, multinational corporations, and the U.N.

Effective: Spring 2011

Prerequisite: ECON 102 ECON 104 ECON 014 I B 303 or BUS 364

PL SC 413

The Rise and Fall of the Soviet Union (3) Background, organization, and operation of the Communist Party and the government of the Soviet Union.

Effective: Spring 2001

Prerequisite: 3 credits from: PL SC 003 PL SC 014 PL SC 155 or RUS 100

PL SC 415

International Organization: Political and Security Functions (3) Theory and evolution of international organization; political and security functions of the United Nations and regional organizations.

Effective: Spring 2003

Prerequisite: PL SC 014

PL SC 417

American Local Government and Administration (3) Organization, powers, functions, and problems of American cities and metropolitan areas; modern trends and developments.

Effective: Winter 1978

Prerequisite: PL SC 001

PL SC 418

International Relations Theory (3) A survey of traditional and contemporary conceptual frameworks and theoretical approaches for the analysis of international relations.

Effective: Winter 1978

Prerequisite: PL SC 014

PL SC 418W

International Relations Theory (3) A survey of traditional and contemporary conceptual frameworks and theoretical approaches for the analysis of international relations.

Effective: Spring 1999

Prerequisite: PL SC 014

PL SC 419

The Bureaucratic State (3) Overview of structural, technological, decision-making, behavioral, and political subsystems of bureaucracy; emphasis on bureaucratic dynamics within larger environmental, interorganizational contexts.

Effective: Fall 2007

Prerequisite: PL SC 001 PL SC 002 or PUBPL 304W

PL SC 422

Comparative Urban Politics (3) Relationships between structure and evolution of city systems and patterns of political behavior.

Effective: Spring 2001

Prerequisite: PL SC 003 PL SC 020 PL SC 022 or PL SC 417

PL SC 423

Post-Soviet Politics (3) Aspects of political transition and institutions of the fifteen Soviet successor republics; emphasis on Russia and republican confederation.

Effective: Fall 2007

Prerequisite: PL SC 003 PL SC 155 or RUS 100

PL SC 424

Topics in Comparative Government and Institutions (3) Topics in the comparative analysis of representative contemporary Western and non-Western governmental institutions.

Effective: Fall 2007

Prerequisite: 3 credits from PL SC 003 PL SC 020 PL SC 022

PL SC 425

Government and Politics of the American States (3) Comparative analysis of political processes; executive, legislative, and judicial decision making and behavior; examination of systems functioning; selected public policies.

Effective: Winter 1978

Prerequisite: PL SC 001

PL SC 426

Political Parties and Interest Groups (3) Interest group basis of American politics, analysis of party and group behavior in electoral politics and the policy process.

Effective: Fall 1983

Prerequisite: PL SC 001

PL SC 427

Political Opinion (3) Nature and development of mass attitudes and opinions; political socialization; voting behavior; relation between opinions and public policy.

Effective: Spring 2001

Prerequisite: PL SC 001

PL SC 428 (WMNST 428) (US;IL)

Gender and Politics (3) Gender in politics in the United States and around the world; major areas of women and politics research.

Effective: Fall 2007

Prerequisite: 3 credits in political science or women's studies

PL SC 429

Analysis of Electoral Politics (3) The new politics, its technology, and the strategic perspectives that underlie it.

Effective: Spring 2016

Prerequisite: PL SC 001 and PL SC 309

PL SC 430

Selected Works in the History of Political Theory (3) Detailed examination and analysis of a selected major work, thinker, or tradition in the history of political theory.

Effective: Spring 1998

Prerequisite: PL SC 017 or PL SC 007

PL SC 430W

Selected Works in the History of Political Theory (3) Detailed examination and analysis of a selected major work, thinker, or tradition in the history of political theory.

Effective: Spring 2008

Prerequisite: PL SC 017 or PL SC 007

PL SC 431

Ancient, Medieval, and Renaissance Political Theories (3) Political theories of Plato and Aristotle; selected Greek, Roman, medieval, and Renaissance theorists through Machiavelli.

Effective: Spring 2003

Prerequisite: PL SC 017 or PL SC 007

PL SC 432

Modern and Contemporary Political Theories (3) Political theories of the seventeenth through the twentieth centuries, including Hobbes, Locke, Rousseau, Marx, Mill, Mosca, Weber, and selected theorists.

Effective: Spring 2003

Prerequisite: PL SC 017 or PL SC 007

PL SC 434 (AFR 434) (IL)

War and Development in Africa (3) This course will examine the relationship between war and development in sub-Saharan Africa in the post colonial era.

Effective: Fall 2012

Prerequisite: PL SC 014 PL SC 003 AFR 110

PL SC 435

Foundations of American Political Theory (3) Political theories of colonial, revolutionary, and constitutional periods presented through works of selected thinkers and analysis of particular political problems.

Effective: Spring 2001

Prerequisite: PL SC 001 PL SC 017 or PL SC 007

PL SC 435W

Foundations of American Political Theory (3) Political theories of the revolutionary and constitutional periods presented through works of selected political thinkers and political issues.

Effective: Spring 2001

Prerequisite: PL SC 001 PL SC 017 or PL SC 007

PL SC 437

War in World Politics (3) Causes, resolution, and consequences of crises and wars; testing theories of conflict using both case and statistical studies.

Effective: Summer 1997

Prerequisite: PL SC 014

PL SC 438

National Security Policies (3) Impact of national security on U.S. government and foreign policy; roles and interaction of President, Congress, government agencies, interest groups.

Effective: Spring 2001

Prerequisite: PL SC 001 or PL SC 014

PL SC 439 (CRIMJ 439)

The Politics of Terrorism (3) Analysis of political terrorism as a violent alternative for peaceful change and traditional warfare in the nuclear age.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or PL SC 014 or permission of program

PL SC 440 (AFR 440, I B 440) (US;IL)

Globalization and Its Implications (3) This course explores the socioeconomic implications of globalization.

Effective: Spring 2013

Prerequisite: AF AM 100 or AFR 110 or PL SC 003 or PL SC 014 or PL SC 020 or PL SC 022

PL SC 442

American Foreign Policy (3) Principles of American foreign policy; processes of policy formulation; roles of the President, Congress, the State Department, and other government agencies.

Effective: Spring 2001

Prerequisite: PL SC 014

PL SC 443 (AFR 443) (IL)

Ethnic Conflict in Africa (3) This course explores the various causes and impacts of ethnic conflicts in the African context.

Effective: Spring 2013

Prerequisite: AF AM 100 AFR 110 PL SC 001 PL SC 003 PL SC 007 PL SC 014 PL SC 017 PL SC 020 or AFRAS 301

PL SC 444

Government and the Economy (3) Interactions of governmental and economic activity in American life. Survey of governmental (national, state, local) promotional, regulatory, and ownership policies.

Effective: Winter 1978

Prerequisite: 3 credits in political science or economics

PL SC 445Y (AF AM 445Y, LER 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

PL SC 451

The Politics of Human Rights (3) This course examines the politics of human rights and repression, focusing on the causes and consequences of state sponsored violence and human rights violations.

Effective: Summer 2015

Prerequisite: PL SC 001 PL SC 003 or PL SC 014

PL SC 452

Government and Politics of Central Europe (3) Politics and society in the Communist Era, the revolutions of 1989, and problems of adjustment to democracy and market.

Effective: Fall 2007

Prerequisite: PL SC 003 PL SC 020 PL SC 022 or PL SC 155

PL SC 453 (IL)

Political Processes in Underdeveloped Systems (3) Comparative analysis of the political, social, and economic problems characteristic of underdeveloped systems.

Effective: Fall 2007

Prerequisite: PL SC 003 PL SC 020 or PL SC 022

PL SC 454 (AFR 454) (IL)

Government and Politics of Africa (3) Contemporary African politics, institutions, and ideologies; patterns of change, social forces, and nation building in selected African states.

Effective: Fall 2012

Prerequisite: 3 credits from: AFR 110 PL SC 003 PL SC 020 or PL SC 022

PL SC 455

Governments and Politics of Western Europe (3) Comparative analysis of political and governmental structures of major West European nations; main functions and processes of such structures.

Effective: Spring 2001

Prerequisite: PL SC 003 or PL SC 020

PL SC 456

Politics and Institutions of Latin-American Nations (3) Social forces and processes, governmental institutions, foreign policies of major states of Latin America.

Effective: Spring 2001

Prerequisite: HIST 179 PL SC 003 PL SC 020 or PL SC 022

PL SC 458

Government and Politics of East Asia (3) This course examines the political systems, institutions, and leadership of East Asian countries.

Effective: Fall 2016

Prerequisite: 3 credits from PL SC 003 PL SC 020 PL SC 022

PL SC 459 (AFR 459) (IL)

Culture and World Politics (3) Role of culture in world politics.

Effective: Spring 2013

PL SC 460 (S T S 460)

Science, Technology, and Public Policy (3) The all-pervasive importance of science and technology policy in modern societies and mechanisms and processes by which it is made.

Effective: Spring 1995

Prerequisite: 3 credits in natural sciences or engineering 3 credits in social and behavioral sciences

PL SC 462

Marxist and Socialist Political Theory (3) Analysis of major problems and key works in the Marxist and Socialist tradition; dialectical materialism, alienation, class warfare, etc.

Effective: Spring 2001

Prerequisite: PL SC 017 PL SC 007 PL SC 413 or PL SC 452

PL SC 466

Political Psychology (3) An interdisciplinary investigation of the major topics and debates characterizing the subfield of political psychology.

Effective: Spring 2014

Prerequisite: PL SC 001 PL SC 003 PL SC 014 or PSYCH 100

PL SC 467

International Relations of the Middle East (3) The international relations of the Middle East, stressing national security policies of regional and outside actors, and major contemporary conflicts.

Effective: Spring 1985

Prerequisite: PL SC 014 or HIST 181

PL SC 468

Politics and the Media (3) An examination of how politics and public policy affect and are shaped by the news media, as a political institution, in America.

Effective: Spring 2015

Prerequisite: PL SC 001 PL SC 003 PL SC 022 PL SC 409 CAS 409 CAS 175 CAS 201 CAS 272 COMM 100 or COMM 110

PL SC 470W

Legal Brief Writing (3) Writing of legal briefs as practiced in American courts.

Effective: Spring 1998

Prerequisite: PL SC 001

PL SC 471

American Constitutional Law (3) The origins of judicial review, landmark decisions of the Supreme Court, and their impact on the American form of government.

Effective: Fall 2007

Prerequisite: PL SC 001

PL SC 472

The American Legal Process (3) Analysis of the roles, procedures, and policies characterizing the American legal system.

Effective: Spring 2001

Prerequisite: PL SC 001

PL SC 473

American Judicial Behavior (3) Analyzes behavior of judges and other participants in the legal process; examines how and why courts function as policymaking bodies.

Effective: Fall 2007

Prerequisite: PL SC 001

PL SC 474

Civil Liberties and Due Process (3) Fundamental problems relating to civil liberties and due process.

Effective: Fall 2007

Prerequisite: PL SC 001

PL SC 480W

Congress and the Presidency (3) Basic characteristics and processes of the national legislature and executive; roles and interaction of these institutions in the policy process.

Effective: Fall 2007

Prerequisite: PL SC 001

PL SC 481

Global Political Economy (3) This course examines states, markets, power, production, and the relations between the various transnational agents who act in these areas. Students may not receive credit for PL SC 481 and PL SC 412.

Effective: Fall 2015

Prerequisite: PL SC 014 or INTST 100

PL SC 482

American State and Urban Politics (3) Explores basic characteristics and processes of American state and urban politics; nature of intergovernmental relations involving these governmental levels.

Effective: Fall 2007

Prerequisite: PL SC 001

PL SC 484W

The Foreign Policy of Soviet Successor States (3) Relations between Russia and The Newly Independent States (NIS); Russia's relations with selected foreign states and political Institutions; regional impact of the NIS in Baltic, Asian, and Central Asian areas.

Effective: Fall 2007

Prerequisite: PL SC 003

PL SC 487

International Law and Organizations (3) Major topics and issues of international law with special attention to institutional arrangements (international organizations) through which that law operates.

Effective: Fall 2007

Prerequisite: PL SC 003 or PL SC 014

PL SC 488

Comparative Public Policy (3) Comparative methodology and public policy implementation in postindustrial societies; selected case studies of policy output.

Effective: Fall 2007

Prerequisite: PL SC 003

PL SC 489

Public Administration (3) A survey of the major approaches to the management of most governmental agencies.

Effective: Fall 2007

Prerequisite: PL SC 001

PL SC 490

Policy Making and Evaluation (3) Advanced analysis of public policy, emphasizing policy evaluation and the factors that determine policy success and failure.

Effective: Fall 2007

Prerequisite: PL SC 001 PL SC 002 or PUBPL 304W

PL SC 491

Peace and Conflict Studies Seminar (3) Advanced study of major contemporary issues of peace and conflict; includes anthropological, technological, psychological, and economic perspectives.

Effective: Spring 2013

Prerequisite: PL SC 014 PL SC 091

PL SC 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

PL SC 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

PL SC 495

Political Science Internship (1-6) Combining experience in government offices, related agencies, or law firms, with appropriate readings and a research paper/report.

Effective: Fall 2007

Prerequisite: prior consent of supervisor adviser or department head; applicable departmental internship requirements such as satisfactory completion of required 300- or 400-level courses appropriate for the internship program selected

PL SC 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

PL SC 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

PL SC 499 (IL)

Foreign Study--Government (1-12) Study, in selected foreign countries, of political institutions.

Effective: Summer 2005

Prerequisite: PL SC 003 3 credits in economics history political science or sociology

PSYCH 083S (GS)

First-Year Seminar in Psychology (3) Scientific, societal, and individual implications of contemporary psychological theory.

Effective: Spring 2007

PSYCH 100 (GS)

Introductory Psychology (3) Introduction to general psychology; principles of human behavior and their applications.

Effective: Spring 2007

PSYCH 100S (GS)

Introductory Psychology (3) Introduction to general psychology; principles of human behavior and their applications.

Effective: Spring 2007

PSYCH 105

Psychology as a Science and Profession (3) Overview of history and methods of psychology as a science and profession; applications and ethical issues in psychology.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

PSYCH 212 (GS)

Introduction to Developmental Psychology (3) Developmental principles; physical growth; linguistic, intellectual, emotional, and social development from infancy to maturity.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 221 (GS)

Introduction to Social Psychology (3) Research and theory on topics including interpersonal attraction, aggression, helping, attitudes, attribution, cooperation, competition, and groups, from a psychological perspective.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 230 (GS)

Introduction to Psychologies of Religion (3) Introduction to major Western psychologies of religion (James, Freud, Jung)

and to subsequent extensions of and departures from them.

Effective: Fall 2012

PSYCH 231 (GS;US)

Introduction to the Psychology of Gender (3) Psychological study of gender in historical and contemporary perspective. Role of gender in development, self-concept, social relations, and mental health.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 232 (GS;US;IL)

Cross-Cultural Psychology (3) This course examines how ethnic and cultural background influences patterns of human thought and behavior.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 238 (GS)

Introduction to Personality Psychology (3) Past and recent conceptualizations of key issues and root ideas of personality psychology.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 243 (GS)

Introduction to Well-being and Positive Psychology (3) Applying psychological knowledge to develop and maintain effective personal adjustment and well-being and positive social relations.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 253 (GS)

Introduction to Psychology of Perception (3) Survey of human perception and processing of perceptual information, with some reference to animal literature. Emphasizes vision and audition.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 256 (GS)

Introduction to Cognitive Psychology (3) Introduction to study of such higher mental processes as thinking and reasoning, imagery, concept formation, problem solving, and skilled performance.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 260A (GS)

Neurological Bases of Human Behavior (3) An introduction to biopsychology, emphasizing the structure and function of the human brain. Students may take only one course for credit from PSY 203 and PSY 203A.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 261 (GS)

Introduction to Psychology of Learning (3) A general survey of the learning area, including animal and human experiments, with the applicability of learning principles being discussed.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 269

Evolutionary Psychology (3) Survey of evolutionary perspectives in current psychological research.

Effective: Spring 2008

Prerequisite: PSYCH 100 ; ANTH 021 BI SC 002 BIOL 133 or BIOL 222

PSYCH 270

Introduction to Abnormal Psychology (3) Overview of assessment, causes, and treatments of psychological disorders.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 281 (GS)

Introduction to Industrial-Organizational Psychology (3) Personnel selection, training, accident prevention, morale, and organizational behavior.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 2007

PSYCH 295

Internship (1-18) Supervised off-campus nongroup instruction including field experiences, practica, or internships.

Written and oral critique of activity required.

Effective: Spring 2007

PSYCH 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 2007

PSYCH 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

PSYCH 300H

Honors Course in Psychology (1-6) Individual study and seminar in selected phases of psychology.

Effective: Spring 2007

Prerequisite: invitation of Program Honors Committee

PSYCH 301W

Basic Research Methods in Psychology (4) Introduction to methods of psychological research, with special attention to hypothesis formation and testing, threats to validity, and data presentation.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 200 or STAT 200

PSYCH 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

PSYCH 400

Intermediate Experimental Design (3) Design and analysis of experiments on human and animal behavior, including application of the t, F, chi-square, and binomial distributions.

Effective: Spring 2007

Prerequisite: PSYCH 200 or STAT 200

PSYCH 404 (EDPSY 450)

Principles of Measurement (3) Scale transformation, norms, standardization, validation procedures, estimation of reliability.

Effective: Spring 2007

Prerequisite: EDPSY 400 PSYCH 100 or PSYCH 200 ; STAT 200

PSYCH 405

Mathematical Psychology (3) Formalized psychological theories including models of social, biological, cognitive, and learning phenomena.

Effective: Spring 2007

Prerequisite: MATH 040 or equivalent PSYCH 200 or STAT 200

PSYCH 407

Advanced Research Methods in Psychology (3) Advanced methodology focusing on the logic and practice of research in a selected content area of psychology.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 200 or STAT 200 ; PSYCH 301W

PSYCH 415

Topics in Developmental Psychology (3) Special topics in developmental psychology.

Effective: Spring 2007

Prerequisite: PSYCH 413 or PSYCH 414

PSYCH 421

Self and Social Judgment (3) Individual's perceptions, evaluations, and decision-making strategies about themselves, others, and social situations or issues.

Effective: Spring 2007

Prerequisite: PSYCH 100 PSYCH 221

PSYCH 423

Social Psychology of Interpersonal/Intergroup Relationships (3) In-depth study of relationships among individuals (e.g., intimate relationships) or groups (e.g., prejudice, cooperation, competition, aggression, and negotiation).

Effective: Spring 2007

Prerequisite: PSYCH 100 PSYCH 221

PSYCH 424

Applied Social Psychology (3) Application of social psychological theories and research methods to field settings and to the study of social issues.

Effective: Spring 2007

Prerequisite: PSYCH 100 PSYCH 221

PSYCH 425

Psychology of Human Emotion (3) Reviews, critiques, and applies major historical and contemporary psychological theories of emotion experience, understanding, and expression.

Effective: Spring 2007

Prerequisite: PSYCH 100 6 additional credits of PSYCH

PSYCH 426 (LING 429)

Language and Thought (3) Relations between language and cognition; cognitive implications of normal and impaired language development; cognition and bilingualism.

Effective: Spring 2007

Prerequisite: PSYCH 100 or LING 001 or LING 100

PSYCH 427 (LING 446)

L1 Acquisition (3) How children learn their first language; psycholinguistic aspects of lexical, syntactic, semantic, and phonological development.

Effective: Spring 2010

Prerequisite: LING 100 or PSYCH 002 or permission of program

PSYCH 432 (US)

Multicultural Psychology in America (3) This course focuses on the central role of culture, race, and ethnicity in the human condition.

Effective: Spring 2007

Prerequisite: PSYCH 100 6 additional credits of PSYCH

PSYCH 436

Humanistic, Existential, and Religious Approaches to Psychology (3) Existential, humanistic, and religious approaches to the psychology of experience, consciousness and will.

Effective: Fall 2012

Prerequisite: PSYCH 100 or RL ST 001

PSYCH 441

Health Psychology (3) Overview of the field with an emphasis on how psychological research contributes to an understanding of health and behavior.

Effective: Spring 2007

Prerequisite: PSYCH 100 6 additional credits of PSYCH

PSYCH 444

Engineering Psychology (3) Methods and results of experimental psychology pertinent to problems which involve man-machine relationships.

Effective: Spring 2007

Prerequisite: PSYCH 100 6 additional credits of GQ or PSYCH

PSYCH 445

Forensic Psychology (3) Relations between psychological theory and research and the law, legal processes, and social policy.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 238 PSYCH 243 or PSYCH 270

PSYCH 450

Psychology of Consciousness (3) Introduction to psychological and physiological aspects of consciousness as related to brain function and clinical psychology.

Effective: Spring 2007

Prerequisite: PSYCH 100 6 additional credits of PSYCH

PSYCH 457 (LING 457)

Psychology of Language (3) Overview of psychological research and theory on language processes, including speech perception, word recognition, meaning representation, comprehension, and language acquisition.

Effective: Fall 2014

Prerequisite: PSYCH 100 or LING 100

PSYCH 458

Visual Cognition (3) Overview of concepts and methods in cognitive visual-spatial processing.

Effective: Spring 2007

Prerequisite: PSYCH 100 6 additional credits of PSYCH

PSYCH 459

Attention and Information Processing (3) An examination of attentional processes. Contemporary informational processing approaches will be emphasized.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 200 or STAT 200 ; 3 credits 400-level PSYCH

PSYCH 460

Comparative Psychology (3) Behavior from standpoint of phylogenetic growth and development; biological implications; comparison of different types of animals, including man.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 260

PSYCH 464

Behavior Genetics (3) Survey of gene mechanisms and gene-environment interactions in the determination of behavior; emphasis on deviant human behavior.

Effective: Spring 2008

Prerequisite: PSYCH 100 ; ANTH 021 BI SC 002 BIOL 133 or BIOL 222

PSYCH 474

Psychological Intervention in Childhood (3) Psychology of personal relationships in school situations.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 212 PSYCH 238 PSYCH 243 or PSYCH 270

PSYCH 475

Psychology of Fear and Stress (3) Description and evaluation of major trends in research on stress and fear in humans and other animals.

Effective: Spring 2007

Prerequisite: PSYCH 100 3 credits of BIOL statistics PSYCH 200 or STAT 200

PSYCH 476

Child Psychopathology (3) Etiology, diagnosis, and facilitation of adjustment of the mentally retarded, gifted, physically handicapped, and emotionally disturbed child.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 212 PSYCH 238 PSYCH 243 or PSYCH 270

PSYCH 477

Mental Health Practicum with Children (3) Overview of interventions for children at risk for mental health disorders; emphasis on intervention strategies, program evaluation, and applied skills.

Effective: Spring 2007

Prerequisite: PSYCH 100 permission of program

PSYCH 478

Clinical Neuropsychology (3) Overview of functional human neuroanatomy and clinical neuropsychology, with emphasis on origin, assessment, and treatment of human brain damage.

Effective: Spring 2007

Prerequisite: PSYCH 100 PSYCH 260

PSYCH 482

Selection and Assessment in Organizations (3) Background in personnel testing, performance measurement, selection strategies, with emphasis on validity and measurement reliability.

Effective: Spring 2007

Prerequisite: PSYCH 100 PSYCH 200 or STAT 200 PSYCH 281

PSYCH 484

Work Attitudes and Motivation (3) Survey of theory and research with respect to attitudes, morale, and motivation of employees and management.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 200 or STAT 200 or 6 credits of GQ

PSYCH 485

Leadership in Work Settings (3) Review of research and application of behavior principles in the areas of management and supervision.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 281 or 3 credits MGMT

PSYCH 490

Senior Seminar in Psychology (3) Capstone experience for senior psychology majors; review of current research literature; topics vary.

Effective: Spring 2007

Prerequisite: PSYCH 301W 6 credits 400-level PSY senior Psychology major

PSYCH 493

Senior Thesis (3-6) Supervised senior thesis research in psychology.

Effective: Spring 2007

Prerequisite: approval of a thesis adviser in the department seventh-semester standing

PSYCH 494

Research Projects (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Spring 2007

PSYCH 494H

Research Projects (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

PSYCH 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

R SOC 011 (GS;US)

Introductory Rural Sociology (3) Basic sociological concepts applied to rural societal institutions and rural communities; causes and consequences of rural social change. Students may take only one course for General Education credit from R SOC 011 GS or SOC 001 GS.

Effective: Summer 2013

RL ST 461 (SOC 461) (US;IL)

Sociology of Religion (3) Contemporary religion in the global perspectives: beliefs, structure, and function of major religious traditions, denominations, and cults.

Effective: Fall 2013

Prerequisite: 3 credits of sociology or religious studies

S T S 047 (SOC 047)

Wilderness, Technology, and Society (3) Impact of developments in science, literature, and art on changing attitudes toward nature; consequences for conservation, preservation, environmental ethics.

Effective: Spring 1991

S T S 055 (AERSP 055) (GN)

Space Science and Technology (3) The science and technology of space exploration and exploitation; physical principles;

research and development; history, space policy, and social implications.
Effective: Spring 1994

S T S 105 (FD SC 105) (GHA)

Food Facts and Fads (3) Impact on society and the individual of modern food technology, food laws, additives, etc.; historical, current, and futuristic aspects.
Effective: Spring 2004

S T S 130

World Food Problems (1-3) Critical examination of data sources, issues, and perspectives concerning contributions of science, technology, and society in resolving world food problems.
Effective: Spring 1991

S T S 135 (PL SC 135) (GS)

The Politics of the Ecological Crisis (3) The political implications of the increasing scarcity of many of the world's resources.
Effective: Spring 2001

S T S 150 (EM SC 150) (GN;IL)

Out of the Fiery Furnace (3) A history of materials, energy, and humans, with emphasis on their interrelationships. For nontechnical students.
Effective: Spring 2006

S T S 151 (HIST 151) (GS;US)

Technology and Society in American History (3) Development of technology in America from colonial times; its reception and its influence on social, economic, and political life.
Effective: Spring 2006

S T S 157 (WMNST 157) (US)

Science, Technology, and Gender (3) The role of women and gender in science, technology, and engineering.
Effective: Fall 2011

S T S 200 (GS)

Critical Issues in Science, Technology, and Society (3) An overview of interactions between science, technology, and society from social sciences and humanities perspectives.
Effective: Spring 1995

S T S 200S (GS)

Critical Issues in Science, Technology, and Society (3) An overview of interactions between science, technology, and society from social sciences and humanities perspectives.
Effective: Summer 1999

S T S 201 (GN)

Climate Change, Energy, and Biodiversity (3) Studies of global warming, energy options, and biodiversity; their interrelations as sciences and as societal issues.
Effective: Summer 1994

S T S 407 (PHIL 407)

Technology and Human Values (3) Interrelationships of twentieth-century technological change and human values. Emphasis on the social and ethical aspects of technological progress.
Effective: Spring 1999
Prerequisite: 9 credits in philosophy including PHIL 107 or 6 credits of philosophy at the 200 level

S T S 408 (COMM 408)

Cultural Foundations of Communications (3) Examination of oral, scribal, print, industrial and electronic cultures; analysis of impact of technology on communications and social structure.
Effective: Spring 2009
Prerequisite: select 3 credits from COMM 100 COMM 110 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 COMM 370 ; or 3 credits of S T S

S T S 420 (EM SC 420, SOC 420)

Energy and Modern Society (3) Technology and economics of energy resources, production, and consumption; environmental factors, exhaustion, new technology.
Effective: Spring 1991

S T S 428 (HIST 428) (IL)

The Darwinian Revolution (3) The origins and implications of evolutionary theory.
Effective: Spring 2006
Prerequisite: An introductory Science course and a history course.

S T S 430 (NUTR 430) (IL)

Global Food Strategies: Problems and Prospects for Reducing World Hunger (3) Technological, social, and political solutions to providing basic food needs; food resources, population, and the environment; current issues.
Effective: Summer 2005

S T S 432 (PHIL 432)

Medical and Health Care Ethics (3) Examines ethical, political, and social issues in the research, implementation, and practice of medicine, medical technologies, and healthcare.
Effective: Fall 1998
Prerequisite: fifth-semester standing

S T S 433 (PHIL 433)

Ethics in Science and Engineering (3) Ethical issues arising in the practice of science and engineering and their philosophical analysis.
Effective: Fall 1995

S T S 435 (PHIL 435)

The Interrelation of Science, Philosophy, and Religion (3) The historical and transformative interactions between science and Western philosophical and religious views of nature, humanity, and God.
Effective: Spring 1996

S T S 460 (PL SC 460)

Science, Technology, and Public Policy (3) The all-pervasive importance of science and technology policy in modern societies and mechanisms and processes by which it is made.
Effective: Spring 1995
Prerequisite: three credits in Natural Sciences or Engineering three credits in Social and Behavioral Sciences

S T S 470

Technology Assessment and Transfer (3) Nature of technology assessment and technology transfer in product design and development process from federal and university labs, and internationally.
Effective: Summer 1996

SO SC 001 (GS)

Urbanization (3) An overview of the social sciences, including an interdisciplinary analysis of the urban process.
Effective: Summer 1995

SO SC 297

Special Topics (1-9) Formal courses given infrequently to explore in depth, a comparatively narrow subject which may be topical or of special interest.
Effective: Fall 1983

SOC 001 (GS)

Introductory Sociology (3) The nature and characteristics of human societies and social life. Students may take only one course for General Education credit from SOC 001 GS or R SOC 011 GS.
Effective: Spring 2003

SOC 001S (GS)

Introductory Sociology (3) The nature and characteristics of human societies and social life.
Effective: Spring 2006

SOC 001W (GS)

Introductory Sociology (3) The nature and characteristics of human societies and social life.
Effective: Fall 1998

SOC 003 (GS)

Introductory Social Psychology (3) The impact of the social environment on perception, attitudes, and behavior.
Effective: Spring 2003

SOC 003H (GS)

Honors Introduction to Social Psychology (3) This is an honors course that enables students to learn, apply, and evaluate basic social psychology concepts, theories, and research.
Effective: Summer 2011

SOC 005 (GS)

Social Problems (3) Current social problems such as economic, racial, and gender inequalities; social deviance and crime; population, environmental, energy, and health problems.
Effective: Spring 2003

SOC 007

Introduction to Social Research (3) Fundamental concepts and problems in social science research; design, measurement, sampling, causation, validity, interpretation.
Effective: Spring 2001

SOC 012 (CRIMJ 012, CRIM 012) (GS)

Criminology (3) Explanations and measurement of crime; criminal law; characteristics of criminals and victims; violent, property, white-collar, organized, and sexual crimes.
Effective: Spring 2008

SOC 013 (CRIMJ 013) (GS)

Juvenile Delinquency (3) Juvenile conduct, causes of delinquency, current methods of treatment; organization and function of agencies concerned with delinquency.
Effective: Spring 2008

SOC 015 (GS)

Urban Sociology (3) City growth and decline; impact of city life on individuals, families, neighborhoods, and government; urban life-styles.
Effective: Summer 1995

SOC 023 (GS)

Population and Policy Issues (3) Local, national, and international population trends; basic techniques of demographic analysis; population problems; implications for public planning and policy.
Effective: Fall 2004

SOC 030 (GS)

Sociology of the Family (3) Family structure and interaction; functions of the family as an institution; cross-cultural comparisons. Students may take only one course for General Education credit from SOC 030 or HD FS 129.

Effective: Spring 2003

SOC 035

Sociology of Aging (3) Introduction to the sociological study of aging.

Effective: Spring 2000

SOC 047 (S T S 047)

Wilderness, Technology, and Society (3) Impact of developments in science, literature, and art on changing attitudes toward nature; consequences for conservation, preservation, environmental ethics.

Effective: Fall 1983

SOC 055 (GS)

Work in Modern Society (3) The nature of work in varied occupational and organizational settings; current trends and work life in the future.

Effective: Summer 1995

SOC 083S (GS)

First-Year Seminar in Sociology (3) Critical approaches to issues in the structure of society.

Effective: Summer 1999

SOC 103 (AF AM 103, WMNST 103) (US)

Racism and Sexism (3) Critical analysis of the structure of race and gender inequality in the contemporary United States.

Effective: Spring 2013

SOC 109

Sociological Perspectives (3) Intensive and critical analysis of the bases of the social order, change, values, knowledge, and conflict.

Effective: Spring 2001

SOC 110 (WMNST 110) (GS;US)

Sociology of Gender (3) Changing sex role expectations and behavior for men and women in contemporary society.

Effective: Summer 2005

SOC 119 (GS;US)

Race and Ethnic Relations (4) Historical patterns and current status of racial and ethnic groups; inequality, competition, and conflict; social movements; government policy.

Effective: Summer 2005

SOC 197

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Spring 1995

SOC 207

Research Methods in Sociology (3) Experiential-based course covering the four main social research methods: available data, survey research, experiments, and field research.

Effective: Spring 2001

Prerequisite: 3 credits in Sociology

SOC 294

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

SOC 296

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which will fall outside the scope of formal courses.

Effective: Fall 1983

SOC 297

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

SOC 298

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be taught in one year or semester.

Effective: Spring 1995

SOC 300

Preceptorship in Sociology (1-8, maximum of 4 per semester) Supervised experience as a teaching assistant under the supervision of an approved faculty member.

Effective: Spring 2003

Prerequisite: 3 credits in course work related to the subject of the course

SOC 309

Sociology of Health (3) Sociological concepts and principles operative in public and private areas of health and illness,

including cultural, ethnic, and ecological factors.

Effective: Spring 2001

Prerequisite: 3 credits in Sociology

SOC 381H

Junior Honors Seminar in Sociology (1) Supervised experience in planning the honors thesis and a sociological career.

Effective: Spring 1999

Prerequisite: sociology major junior standing and admission to the Schreyer Honors College

SOC 395

Internship (1-6) Supervised off-campus, non-group instruction including individual field experiences, practicums or internships. Written and oral critique of activity required.

Effective: Fall 1981

Prerequisite: prior approval of proposed assignment by instructor

SOC 400W

Senior Research Seminar (3) Major concepts and principles of sociology through reading, data analysis, and writing. Capstone course for senior Sociology majors.

Effective: Fall 2001

Prerequisite: SOC 470

SOC 403

Advanced Social Psychology (3) Analysis of the major theoretical approaches and research findings of contemporary social psychology.

Effective: Fall 1983

Prerequisite: SOC 003

SOC 404

Social Influence and Small Groups (3) The study of social influence, leadership and status, and social cohesion and commitment processes in small groups.

Effective: Spring 2007

Prerequisite: SOC 003 or PSYCH 420

SOC 405

Sociological Theory (3) Overview of the development of sociological theory; current issues and controversies.

Effective: Spring 2001

Prerequisite: 3 credits in the Sociology

SOC 406 (CRIMJ 406, CRIM 406)

Sociology of Deviance (3) Theory and research concerning deviant behaviors and lifestyles viewed as significant departures from a group's normative expectations.

Effective: Spring 2008

Prerequisite: SOC 012 SOC 013 or SOC 005 or permission of program

SOC 408

Urban Ecology (3) Spatial and temporal aspects of urban structure; urban growth, neighborhoods, racial and ethnic groups, mental illness; cross-cultural perspectives.

Effective: Fall 1983

Prerequisite: 3 credits in sociology

SOC 409 (AF AM 409) (US)

Racial and Ethnic Inequality in America (3) The impact of inequality and discrimination on individual and group identity among various racial and ethnic groups.

Effective: Fall 2012

Prerequisite: 3 credits in Sociology

SOC 412 (CRIMJ 412, CRIM 412)

Crime, Social Control, and the Legal System (3) Legal and extralegal control; public opinion on crime; criminal justice and correctional processes; legal sanctions; control strategies. Field trip.

Effective: Spring 2008

Prerequisite: SOC 012 SOC 013 or SOC 005

SOC 413 (CRIM 413, CRIMJ 413)

Advanced Criminological Theory (3) This course provides an in-depth look at theories of crime and examines influential empirical studies designed to these theories.

Effective: Spring 2008

Prerequisite: SOC 012 CRIMJ 250W

SOC 414 (CRIMJ 414, CRIM 414)

Criminal Careers and the Organization of Crime (3) Research on and theory of criminal careers and crime organizations, emphasizing recruitment and disengagement; offender characteristics and life- styles; policy implications.

Effective: Spring 2008

Prerequisite: SOC 012 SOC 013 or SOC 005

SOC 416 (EDTHP 416) (US)

Sociology of Education (3) The theoretical, conceptual, and descriptive contributions of sociology to education.

Effective: Spring 2006

Prerequisite: 3 credits in Sociology

SOC 419 (US)

Race and Public Policy (3) Seminar format course in which sociological theory and research are applied to current race policy issues.

Effective: Spring 2006

Prerequisite: 3 credits in Sociology

SOC 420 (EM SC 420, S T S 420)

Energy and Modern Society (3) Technology and economics of energy resources, production, and consumption; environmental factors, exhaustion, new technology.

Effective: Spring 2001

Prerequisite: 3 credits in Sociology

SOC 422

World Population Diversity (3) Survey of world diversity in national population growth/composition; the impacts of demographic change on the economic/social life of nations/people.

Effective: Spring 2001

Prerequisite: 3 credits in Sociology

SOC 423

Social Demography (3) Social demographic perspectives on fertility, mortality, morbidity, migration, population density, demographic transitions, social mobility, family, the aged, and minorities.

Effective: Spring 2001

Prerequisite: SOC 023 or SOC 422

SOC 424

Social Change (3) Critical review of classical and recent theories of social change, emphasizing the transformations occurring in the modern world.

Effective: Fall 1983

Prerequisite: 3 credits in sociology

SOC 428

Homelessness in America (3) Survey of social science research on homelessness in the contemporary United States.

Effective: Spring 2001

Prerequisite: 3 credits in Sociology

SOC 429

Social Stratification (3) Structure and dynamics of class, caste, and status systems; class differentials and social mobility; current theoretical and methodological issues.

Effective: Winter 1978

Prerequisite: 3 credits in sociology

SOC 430

Family in Cross-Cultural Perspective (3) Sociological analysis of family systems in various cultures and subcultures.

Effective: Spring 2001

Prerequisite: 3 credits in Sociology

SOC 431 (HD FS 431)

Family Disorganization: Stress Points in the Contemporary Family (3) Focuses on divorce, remarriage, incest, family violence as well as problems associated with family formation and parent-child relations.

Effective: Spring 1994

Prerequisite: 6 credits of human development and family studies psychology or sociology

SOC 432

Social Movements (3) Why and how people mobilize to promote or retard social change. Factors predicting success or failure of social movements.

Effective: Fall 1983

Prerequisite: 3 credits in sociology

SOC 435 (HD FS 434)

Perspectives on Aging (3) An analysis of the demographic, social, and cultural factors affecting the aged population in American society.

Effective: Fall 2007

Prerequisite: 3 credits in Sociology

SOC 440 (HD FS 440)

Family Policy (3) An in-depth examination of family policy.

Effective: Spring 2007

Prerequisite: 3 credits of SOC or HD FS

SOC 446

Political Sociology (3) Sociological analysis of types of political organization and their relations with other elements of social life.

Effective: Winter 1978

Prerequisite: 3 credits in sociology

SOC 447 (EDTHP 411) (US)

Ethnic Minorities and Schools in the United States (3) Analysis of the social and cultural factors which affect educational outcomes among minority pupils, especially Blacks, Hispanics, and Indians.

Effective: Fall 2015

SOC 454 (US)

The City in Postindustrial Society (3) Postindustrial social organization in the United States and Europe; consequences for metropolitan social stratification, community power, and environmental quality.

Effective: Spring 2006

Prerequisite: 3 credits in Sociology

SOC 455

Work and Occupations (3) Work and occupational life in modern society; work in the past, present, and future.

Effective: Fall 1983

Prerequisite: 3 credits in sociology

SOC 456 (WMNST 456)

Gender, Occupations, and Professions (3) The role of gender in shaping contemporary North American patterns of employment, occupational roles, and statuses.

Effective: Spring 2013

Prerequisite: WMNST 100 or 3 credits in Sociology

SOC 461 (RL ST 461) (US;IL)

Sociology of Religion (3) Contemporary religion in the global perspective: beliefs, structure, and function of major religious traditions, denominations, and cults.

Effective: Fall 2013

Prerequisite: 3 credits in sociology or religious studies

SOC 467 (CRIM 467, CRIMJ 467)

Law and Society (3) Law and society studies the social origins of law and legal systems; occupational careers, and decision-making of legal officials.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or CRIMJ 113 or permission of program

SOC 470

Intermediate Social Statistics (4) Descriptive and inferential statistics in social research: central tendency and variation, normal distribution, measures of association, confidence intervals, hypothesis testing.

Effective: Fall 2001

Prerequisite: SOC 207

SOC 471

Qualitative Research Methods in Sociology (3) Theory, methods, and practice of qualitative data collection, including observation, participant observation, interviewing; supervised projects in natural settings.

Effective: Spring 2001

Prerequisite: 3 credits in Sociology

SOC 481H

Senior Honors Seminar in Sociology (1) Supervised experience in planning and writing the honors thesis.

Effective: Spring 1999

Prerequisite: sociology major senior standing and admission to the Schreyer Honors College

SOC 494

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 1994

SOC 494H

Research Project (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Fall 2007

SOC 495

Internship (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

Effective: Spring 2000

Prerequisite: prior approval of proposed assignment by instructor

SOC 496

Independent Studies (1-18) Creative projects, including research and design, which are supervised on an individual basis and which fall outside the scope of formal courses.

Effective: Fall 1983

SOC 497

Special Topics (1-9) Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Effective: Fall 1983

SOC 499 (IL)

Foreign Study--Sociology (2-6) Study, in selected foreign countries, of groups, institutions, and social problems.

Effective: Summer 2005

Prerequisite: 3 credits in Sociology

WMNST 001S (GS;US;IL)

Introduction to Women's Studies (3) Interdisciplinary consideration of the scholarly theories and research pertaining to women's experiences and women's status in contemporary American society.

Effective: Fall 2009

WMNST 100 (GS;US;IL)

Introduction to Women's and Gender Studies (3) Interdisciplinary consideration of the scholarly theories and research pertaining to women's experiences and women's status in contemporary American society.

Effective: Spring 2013

WMNST 100U (GS;US;IL)

Introduction to Women's and Gender Studies (3) Interdisciplinary consideration of the scholarly theories and research pertaining to women's experiences and women's status in contemporary American society.

Effective: Fall 2016 Ending: Fall 2016

WMNST 103 (AF AM 103, SOC 103) (US)

Racism and Sexism (3) Critical analysis of the structure of race and gender inequality in the contemporary United States.

Effective: Spring 2013

WMNST 105 (GS;US)

Living in a Diverse World (3) Critical perspectives on the relationship between social difference and power, emphasizing gender, race, sexuality, class, and disability.

Effective: Spring 2015

WMNST 110 (SOC 110) (GS;US)

Sociology of Gender (3) Changing sex role expectations and behavior for men and women in contemporary society.

Effective: Summer 2005

WMNST 116 (HIST 116) (GS;US;IL)

Family and Sex Roles in Modern History (3) Historical perspectives on the Western family since 1500: gender roles, marriage, sexuality, child rearing, and old age; emphasis on United States.

Effective: Spring 2006

WMNST 136 (LER 136) (US)

Race, Gender, and Employment (3) Employment relations and legislative and policy responses to labor force issues of racial and gender inequality.

Effective: Spring 2008

WMNST 157 (S T S 157) (US)

Science, Technology, and Gender (3) The role of women and gender in science, technology, and engineering.

Effective: Fall 2011

WMNST 200 (GS;IL)

Global Feminisms (3) This course examines the diverse contents and forms of "feminism" worldwide, emphasizing women's engagement with unequal, unjust, impacts of globalization.

Effective: Summer 2012

WMNST 202 (AFR 202) (GS;IL)

Gender Dynamics in Africa (3) Critical analysis of multidisciplinary research on relations between men and women in Africa and critique of Western feminist theories.

Effective: Fall 2012

WMNST 205 (COMM 205) (GS;US)

Gender, Diversity and the Media (3) Explores the relationship between media and society through critical analysis of its role in social reality.

Effective: Spring 2015

WMNST 426Y (GEOG 426Y) (US;IL)

Gender Geographies (3) Description and explanation of the links between gender relations and spatial structures; gender and work, social services, and neighborhood activism.

Effective: Fall 2013

Prerequisite: GEOG 020 GEOG 126 GEOG 120 WMNST 100

WMNST 428 (PL SC 428) (US;IL)

Gender and Politics (3) Gender in politics in the United States and around the world; major areas of women and politics research.

Effective: Fall 2007

Prerequisite: 3 credits in political science or women's studies

WMNST 456 (SOC 456)

Gender, Occupations, and Professions (3) The role of gender in shaping contemporary North American patterns of employment, occupational roles, and statuses.

Effective: Spring 2013

Prerequisite: WMNST 100 or 3 credits in Sociology

WMNST 471 (PSYCH 479) (US)

The Psychology of Gender (3) Theories and research on gender differences and gender roles. Emphasis on women's and men's current positions in society.

Effective: Spring 2007

Prerequisite: PSYCH 100 PSYCH 221

WMNST 472 (LER 472)

Work-Life Practices and Policies (3) Explore the causes and consequences of conflicts between work, family, and other life commitments, and how these may be resolved.

Effective: Spring 2008

Prerequisite: 3 credits of LER

B.A. Degree Requirements: Second Foreign Language

119 Courses

ARAB 001

Elementary Modern Standard Arabic I (4) Introduction to reading, writing, pronunciation, and aural comprehension of modern standard Arabic; simple grammatical forms; basic vocabulary.
Effective: Summer 2010

ARAB 002

Elementary Modern Standard Arabic II (4) Continuation of ARAB 001; development of additional skills in conversation, reading, and writing; grammar and vocabulary building; cultural components.
Effective: Summer 2010
Prerequisite: ARAB 001

ARAB 003

Intermediate Modern Standard Arabic (4) More complex grammatical forms; vocabulary building principles; continued development of skills in conversation, reading, writing; culturally-oriented readings and films.
Effective: Summer 2010
Prerequisite: ARAB 002

ARAB 110 (GH;IL)

Arab Language, Cultures, and Current Topics (3) Fourth-semester Modern Standard Arabic: study of cultures through authentic discourse, texts, film; development of reading, writing, listening, speaking skills.
Effective: Summer 2010
Prerequisite: ARAB 003 or permission of program

CHNS 001

Level One Chinese A (4) Introductory study of Chinese language, with audio-lingual practice of Mandarin Chinese and attention to structure and the writing system.
Effective: Spring 2011

CHNS 002

Level One Chinese B (4) Continued audio-lingual practice of Mandarin Chinese, further study of structure, practice in reading and writing Chinese.
Effective: Spring 2011
Prerequisite: CHNS 001

CHNS 003

Level Two Chinese A (4) Continued audio-lingual practice of Mandarin Chinese, more extensive practice in reading and writing; study of Chinese culture.
Effective: Spring 2011
Prerequisite: CHNS 002

CHNS 110 (IL)

Level Two Chinese B (4) Readings in selected modern Chinese literature (short stories, plays, essays, poems) and other texts; practice in conversation and simple composition.
Effective: Spring 2011
Prerequisite: CHNS 003

CHNS 401 (IL)

Level Three Chinese A (4) Emphasis on oral proficiency through discussions of aspects of contemporary Chinese culture.
Effective: Spring 2011
Prerequisite: CHNS 110

CHNS 402 (IL)

Level Three Chinese B (4) Readings in representative works of traditional and modern literature; practice in composition; study of aspects of Chinese culture.
Effective: Spring 2011
Prerequisite: CHNS 401 OR EQUIVALENT

FR 001

Elementary French I (4) Grammar, with reading and writing of simple French; oral and aural work stressed. Students who have received high school credit for two or more years of French may not schedule this course for credit, without the permission of the department.
Effective: Fall 1985

FR 002

Elementary French II (4) Grammar and reading continued; oral and aural phases progressively increased. Students who have received high school credit for four years of French may not schedule this course for credit, without the permission of the department.
Effective: Fall 1985
Prerequisite: FR 001

FR 003

Intermediate French (4) Grammar, reading, composition, oral and aural exercises.
Effective: Fall 1985
Prerequisite: FR 002

FR 111

Elementary French (6) Acquisition of basic skills in the active use of French: listening, speaking, reading, and writing.
Effective: Fall 1983

FR 112

Intermediate French (6) Reinforcement of basic skills previously acquired in the active use of French in FR 111.
Effective: Fall 1983

FR 199 (IL)

Foreign Study--French (1-12) Intensive postintermediate grammar review, with emphasis on oral skills and vocabulary building.

Effective: Summer 2005

Prerequisite: FR 003

FR 201 (IL)

Oral Communication and Reading Comprehension (3) Emphasis on oral skills and reading for total comprehension.

Effective: Spring 2007

Prerequisite: FR 003 or FR 112

FR 202 (IL)

Grammar and Composition (3) Grammar review and writing of short essays.

Effective: Spring 2006

Prerequisite: FR 003

FR 299 (IL)

Foreign Study--French (3-12) Writing practice at postintermediate level. Cultural readings about French civilization.

Effective: Summer 2005

Prerequisite: FR 199

FR 351 (IL)

Introduction to French Literature I (3) Introduction to close textual reading and analysis of selected works of French literature from the middle ages to 1789.

Effective: Summer 2013

Prerequisite: FR 201 FR 202

FR 352 (IL)

Introduction to French Literature II (3) Introduction to close textual reading and analysis of selected works of French Literature from 1789 to the present.

Effective: Summer 2013

Prerequisite: FR 201 FR 202

FR 401 (IL)

Advanced Oral Communication (3) Emphasis on speaking and listening comprehension through discussion of current issues, using journalistic materials.

Effective: Spring 2006

Prerequisite: FR 201 FR 202

FR 402Y (IL)

Advanced Grammar and Writing (3) Advanced study of the structure of the French language. Intensive essay writing.

Effective: Spring 2006

Prerequisite: FR 201 FR 202

FR 410 (IL)

French Press (3) Extensive readings of selected french daily and weekly newspapers and magazines, along with newscast viewings.

Effective: Spring 2007

Prerequisite: FR 331 or FR 332

GER 001

Elementary German I (4) Introduction to listening, speaking, reading, and writing with emphasis on the first two skills; cultural aspects through readings and videos. Students who have received high school credit for two or more years of German may not schedule this course for credit, without the permission of the department.

Effective: Fall 2012

GER 002

Elementary German II (4) Continuation of GER 001; further introduction of basic structures, culture, and development of four basic skills stressing aural-oral aspects. Students who have received high school credit for four or more years of German may not schedule this course for credit, without the permission of the department.

Effective: Fall 2012

Prerequisite: GER 001

GER 003

Intermediate German (4) Continued four-skill development with increased emphasis on reading, writing, and grammatical accuracy; culturally-oriented reading selections and videos. Students may receive credit for only one of the following: GER 003 or GER 008.

Effective: Summer 1994

Prerequisite: GER 002

GER 011

Intensive Basic German (6) Listening, speaking, reading, writing, basic structures and vocabulary of German. Taught on

an accelerated basis. Students may receive credit for only one of the following: GER 001, 011, or 015.
Effective: Fall 1983

GER 012

Intensive Intermediate German (6) Continued skill development of structures and vocabulary; listening, speaking, reading, writing. Taught on an accelerated basis. Students may receive credit for only one of the following: GER 002, 003, 012, or 016.

Effective: Fall 1983

Prerequisite: GER 011

GER 199 (IL)

Foreign Study--German (3-6) Intermediate training in German language skills.

Effective: Summer 2005

Prerequisite: GER 002

GER 201 (IL)

Conversation and Composition (4) Continuation of GER 003; emphasis on reading, writing, and conversational skills; course utilizes short literary selections, a concise novel, videos.

Effective: Fall 2006

Prerequisite: GER 003 or GER 008

GER 301 (IL)

Intermediate Speaking and Listening (3) Intensive practice in spoken German through readings, discussions and video.

Effective: Spring 2012

Prerequisite: GER 201 or GER 208

GER 302W

Intermediate Composition and Grammar (3) Continuation of oral and written practice in German with extensive work in composition.

Effective: Spring 2012

Prerequisite: GER 201 or GER 208

GER 344 (IL)

Intermediate German Culture (3) An overview of German culture from the Middle Ages to the present. Conducted in German.

Effective: Spring 2012

Prerequisite: GER 301 or GER 302W

GREEK 001

Elementary Classical and New Testament Greek (4) Pronunciation, forms, syntax, and translation.

Effective: Fall 1983

GREEK 002

Elementary Classical and New Testament Greek (4) Further instruction in syntax and sentence structure.

Effective: Fall 1983

Prerequisite: GREEK 001

GREEK 101

Introductory Ancient Greek (4) Fundamentals of classical Greek grammar, syntax, and vocabulary.

Effective: Fall 2001

GREEK 102

Intermediate Ancient Greek (4) Intermediate study of classical Greek grammar, syntax, and vocabulary.

Effective: Fall 2001

Prerequisite: GREEK 101

GREEK 420

Greek Prose Authors (3-6) Readings in representative authors.

Effective: Summer 2011

GREEK 425

Greek Historians (3-6) Translation and study of one or more of the ancient Greek historians.

Effective: Summer 2011

Prerequisite: GREEK 102

GREEK 430

Greek Poetry (3-6) Translation and analysis of selected readings in Greek poetry.

Effective: Summer 2011

Prerequisite: GREEK 102

HEBR 001

Basic Modern Hebrew I (4) An introduction to modern Hebrew in its written and spoken forms; oral and aural work stressed.

Effective: Summer 1990

HEBR 002

Basic Modern Hebrew II (4) Continued study of grammar; emphasis on improving oral-aural facility, with increased attention to reading and writing.

Effective: Summer 1990

Prerequisite: HEBR 001

HEBR 003

Intermediate Modern Hebrew (4) Grammar, reading, composition, and oral and aural exercises.

Effective: Summer 1977

Prerequisite: HEBR 002

HEBR 401

Advanced Hebrew--Conversation Emphasis (3 per semester, maximum of 6) Development of oral proficiency through discussions focusing on issues in contemporary Jewish culture.

Effective: Summer 2011

HEBR 402

Advanced Hebrew--Reading Emphasis (3 per semester, maximum of 6) Readings in representative works of traditional and modern literature; practice in composition; study of aspects of Jewish culture.

Effective: Summer 2011

HINDI 003

Level Two Hindi A (4) This is an intermediate level course in Hindi that seeks to improve student's skills in oral and written expression.

Effective: Summer 2010

Prerequisite: HINDI 002 or equivalent competency

IT 001

Elementary Italian I (4) For beginners. Grammar, with reading and writing of simple Italian; oral and aural work stressed.

Effective: Spring 1988

IT 002

Elementary Italian II (4) Grammar and reading continued; oral and aural phrases progressively increased; composition.

Effective: Spring 1988

Prerequisite: IT 001

IT 003

Intermediate Italian (4) Advanced grammar; oral and written composition; reading of modern authors; Italian life and culture.

Effective: Winter 1978

Prerequisite: IT 002

IT 301

Pathways to Fluency (3) For majors, minors, and others with adequate preparation; deepening of grammatical skills, integrated conversation, composition, and reading.

Effective: Fall 2005

Prerequisite: IT 003

IT 415

Dante (3) Readings in the Divina Commedia and the related lesser works of Dante Alighieri.

Effective: Summer 2011

IT 422

Topics in the Italian Renaissance (3) Topics vary by year and may include "Theories of Love," "Magic, Witchcraft, Alchemy, and the Emergence of Modern Science," etc.

Effective: Fall 2005

Prerequisite: any Italian course at the 300-level

IT 450

Nineteenth-Century Italian Literature (3) Italian romanticism, Verismo and neoclassicism, their origin and development in the novel, poetry, and drama.

Effective: Fall 2015

Prerequisite: any 300-level IT course

IT 460

Twentieth-Century Italian Literature (3) Modern and contemporary Italian prose, drama, and poetry.

Effective: Fall 2015

Prerequisite: any 300-level IT course

JAPNS 001

Level One Japanese A (4) Introduction to modern Japanese; development of audio-lingual facility and ability to read and write Japanese without aid of romanization.

Effective: Spring 2011

JAPNS 002

Level One Japanese B (4) Continuation of elementary Japanese, with emphasis on improving audio-lingual facility and strengthening reading and writing skills in modern Japanese.

Effective: Spring 2011

Prerequisite: JAPNS 001

JAPNS 003

Level Two Japanese A (4) Continued study of modern Japanese at elementary level; extensive audio-lingual practice for conversational fluency; reading/writing original scripts.

Effective: Spring 2011

Prerequisite: JAPNS 002

JAPNS 110 (IL)

Level Two Japanese B (4) Intermediate Japanese - Continued study of modern Japanese at intermediate level; extensive audio-lingual practice for conversational fluency; reading/writing original scripts.

Effective: Spring 2011

Prerequisite: JAPNS 003

JAPNS 401 (IL)

Level Three Japanese A (4) Further acquisition of the four language skills in Japanese--reading, writing, speaking and listening comprehension.

Effective: Spring 2011

Prerequisite: JAPNS 110

JAPNS 402 (IL)

Level Three Japanese B (4) Exclusively for study abroad returnees. To further develop Japanese proficiency in speaking, listening, reading, and writing.

Effective: Spring 2011

Prerequisite: JAPNS 401

JAPNS 452 (IL)

Contemporary Japan: Cultures, Lifestyles, Trends (3 per semester/maximum of 6) Survey of aspects of modern Japanese society; includes readings from Japanese newspapers, magazines, and fiction; topics may vary each semester.

Effective: Spring 2010

Prerequisite: JAPNS 401

JAPNS 453 (IL)

Japanese Film (3 per semester/maximum of 6) Selected films and directors representing various aspects of Japanese culture and cinema; topics may vary each semester.

Effective: Spring 2010

Prerequisite: JAPNS 401

JAPNS 454 (IL)

Japanese Literature (3 per semester/maximum of 6) Selected works from important Japanese texts representing genres such as autobiography, poetry, fiction, and drama; topics may vary each semester.

Effective: Spring 2010

Prerequisite: JAPNS 401

KOR 001

Level One Korean A (4) Listening, speaking, reading, writing Korean: an introduction for beginners; basic structures and vocabulary; cultural elements.

Effective: Spring 2011

KOR 002

Level One Korean B (4) Listening, speaking, reading, writing Korean: structures and vocabulary; cultural elements.

Effective: Spring 2011

Prerequisite: KOR 001

KOR 003

Level Two Korean A (4) Further development of listening, speaking, reading, writing skills in Korean; cultural elements.

Effective: Spring 2011

Prerequisite: KOR 002

LATIN 001

Elementary Latin (4) Pronunciation; inflections; simple rules of syntax.

Effective: Winter 1978

LATIN 002

Elementary Latin (4) Advanced syntax and sentence structure.

Effective: Winter 1978

Prerequisite: LATIN 001

LATIN 003

Intermediate Latin (4) Selected readings from representative authors.

Effective: Winter 1978

Prerequisite: LATIN 002

LATIN 402

Republican Literature (3-12) Selected works by Plautus, Lucretius, Catullus, Cicero (content varies).

Effective: Summer 1995

Prerequisite: LATIN 003

LATIN 403

Augustan Age Literature (3-12) Selected works by Virgil, Horace, Propertius, Tibullus, Ovid, Livy (content varies).

Effective: Summer 1995

Prerequisite: LATIN 003

LATIN 404

Silver Age Literature (3-12) Selected works by Petronius, Seneca, Tacitus, Juvenal, Martial, Pliny the Younger (content varies).

Effective: Summer 1995

Prerequisite: LATIN 003

PORT 001

Elementary Portuguese I (4) For beginners. Grammar, with reading and writing of simple Portuguese; oral and aural work stressed.

Effective: Spring 1987

PORT 002

Elementary Portuguese II (4) Grammar, reading, and conversation continued; special emphasis on the language, literature, and life of Brazil.

Effective: Spring 1988

Prerequisite: PORT 001

PORT 003

Intermediate Portuguese (4) Grammar, reading, composition, and conversation.

Effective: Winter 1978

Prerequisite: PORT 002

PORT 405

Advanced Composition and Conversation (3) Intended to strengthen the advanced student's ability to speak, read, and write in modern Brazilian Portuguese.

Effective: Summer 1981

Prerequisite: PORT 003

PORT 476

Brazilian Literature, The Modern Era (1880 to the Present) (3) A survey of the major texts of Brazilian literature from romanticism to the present.

Effective: Summer 1991

Prerequisite: PORT 003

PORT 480

The Brazilian Novel (3) A survey of the Brazilian novel from its origins to the present.

Effective: Spring 1993

Prerequisite: PORT 003 PORT 405

RUS 001

Elementary Russian I (4) Audio-lingual approach to basic Russian; writing. Students who have received high school credit for two or more years of Russian may not schedule this course for credit, without the permission of the department.

Effective: Fall 1985

RUS 002

Elementary Russian II (4) Audio-lingual approach to basic Russian continued; writing. Students who have received high school credit for four years of Russian may not schedule this course for credit, without the permission of the department.

Effective: Fall 1985

Prerequisite: RUS 001

RUS 003

Intermediate Russian (4) Emphasis on reading unsimplified texts; composition; grammatical analysis.

Effective: Fall 1985

Prerequisite: RUS 002

RUS 204 (IL)

Intermediate Russian II (4) Intensive practice of Russian reading, writing, listening and speaking; review of Russian grammar.

Effective: Summer 2011

Prerequisite: RUS 003

RUS 214 (IL)

Intermediate Russian III (4) Intensive practice of Russian reading, writing, listening and speaking; review of Russian grammar.

Effective: Summer 2011

Prerequisite: RUS 003

RUS 304 (IL)

Readings in Russian III (3) Extensive reading of contemporary Russian texts, including articles from Soviet press and short fiction.

Effective: Spring 2006

Prerequisite: 6 credits of Russian at the 200 level

RUS 305 (IL)

Advanced Russian Conversation (3) Discussion and role-playing based on real-life situations and current events; supervised by a native speaker.

Effective: Spring 2006

Prerequisite: RUS 204 RUS 214

RUS 360 (IL)

Advanced Russian Grammar (3) Russian morphology and syntax on an advanced level.

Effective: Spring 2006

Prerequisite: 6 credits of Russian at the 200 level

RUS 412 (IL)

Russian Translation (3 per semester/maximum of 6) Translation from Russian into English of complex texts from the humanities, social sciences, and technical fields.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 426 (IL)

Dostoevsky (3) Study of representative works by Dostoevsky in the original Russian.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 427 (IL)

Tolstoy (3) Study of representative works by Tolstoy in the original Russian.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

SPAN 001

Elementary Spanish I (4) Audio-lingual approach to basic Spanish; writing. Students who have received high school credit for two or more years of Spanish may not schedule this course for credit, without the permission of the department.

Effective: Fall 1985

SPAN 002

Elementary Spanish II (4) Audio-lingual approach to basic Spanish continued; writing. Students who have received high school credit for four years of Spanish may not schedule this course for credit, without the permission of the department.

Effective: Fall 1985

Prerequisite: SPAN 001

SPAN 003

Intermediate Spanish (4) Audio-lingual review of structure; writing; reading.

Effective: Fall 1985

Prerequisite: SPAN 002

SPAN 010

Intensive Spanish (6) Basic Spanish grammar, oral, aural, and writing skills (essentially equivalent to SPAN 001 and first half of SPAN 002).

Effective: Fall 1988

SPAN 020

Intensive Spanish (6) Basic and intermediate Spanish grammar, oral, aural, and writing skills (essentially equivalent to second half of SPAN 002 and all of SPAN 003).

Effective: Fall 1988

Prerequisite: SPAN 010

SPAN 100

Intermediate Grammar and Composition (3) An intermediate level grammar review that also incorporates directed and original composition exercises.

Effective: Summer 1996

Prerequisite: SPAN 003 or placement

SPAN 110

Intermediate Conversation (3) Practice in oral expression in Spanish, with emphasis on aural comprehension, idiomatic usage, and fluency. Use of journalistic materials.

Effective: Winter 1978

Prerequisite: SPAN 003 or placement

SPAN 120

Intermediate Reading (3) Emphasis on rapid reading comprehension. Selected readings from contemporary Hispanic literature, social sciences, current events, etc.

Effective: Winter 1978

Prerequisite: SPAN 003 or placement

SPAN 200

Intensive Grammar and Composition (3) Intensive grammar review; composition. Designed primarily for majors and prospective majors.

Effective: Spring 2001

Prerequisite: SPAN 100 or by placement

SPAN 210

Readings in Iberian Civilization (3) Intermediate level Spanish readings dealing with Iberian life from pre-historic times to the present.

Effective: Spring 1993

Prerequisite: SPAN 200

SPAN 220

Readings in Ibero-American Civilization (3) Intermediate level Spanish readings dealing with Ibero-American life from the pre-conquest to the present.

Effective: Spring 1992

Prerequisite: SPAN 200

SPAN 253W

Introduction to Hispanic Literature (3) Introduction to generic distinctions, critical methods, and approaches to Hispanic literature.

Effective: Spring 2008

Prerequisite: SPAN 100 and SPAN 110

SPAN 300

Advanced Grammar and Composition Through Reading (3) Development of advanced grammar and composition skills through reading texts by native speakers and adapting their techniques for original compositions.

Effective: Spring 2013

Prerequisite: SPAN 200

SPAN 301

Advanced Writing and Stylistics in Spanish for Spanish Speakers (3) This course will enhance writing proficiency in Spanish of Spanish speaking students by targeting common problems characteristic of Spanish speakers.

Effective: Spring 2008

Prerequisite: SPAN 100A

SPAN 353

Topics in the Cultures of Spain (3) This course offers a comparative study of the literature, artistic manifestations, intellectual traditions, and cultural productions of Spain.

Effective: Fall 2015

Prerequisite: SPAN 200 and SPAN 253W

SPAN 354

Topics in Border Studies (3) This course offers a study of borders as key sites of contact, exchange, conflict, hybridity, and identity production in and across various contexts of Spanish, Latin American, and/or Latina/o culture(s).

Effective: Fall 2015

Prerequisite: SPAN 200 and SPAN 253W

SPAN 355

Topics in the Cultures of Latin America (3) This course offers a comparative study of literatures, artistic manifestations, intellectual traditions, and cultural productions of the Latin American region.

Effective: Fall 2015

Prerequisite: SPAN 200 and SPAN 253W

SPAN 356

Topics in the Cultures of the Americas (3) This course offers a comparative study of the literatures and cultures of the Americas, bringing Latin America into dialogue with the United States (and in some instances Canada).

Effective: Fall 2015

Prerequisite: SPAN 200 and SPAN 253W

SPAN 410

Advanced Oral Expression and Communication (3) Emphasis on achieving practical command of spoken Spanish and the comprehension of native speech. Use of journalistic materials.

Effective: Fall 1995

Prerequisite: SPAN 200

SPAN 439

Don Quijote (3) Thorough study of the masterpiece, including its sources, genesis, language, style, success, and influence.

Effective: Spring 2013

Prerequisite: SPAN 253W

SPAN 472

The Contemporary Spanish American Novel (3) The regionalist and social novel since 1910, together with the social background.

Effective: Spring 2013

Prerequisite: SPAN 253W

SPAN 476

Masterpieces of Spanish American Literature (3) Reading, analysis, and discussion of selected major works representative of Spanish American prose and poetry.

Effective: Spring 2013

Prerequisite: SPAN 253W

SPAN 490

Masterpieces of Spanish Prose (3) Reading, analysis, and discussion of selected masterpieces of Spanish novels, short stories, etc.

Effective: Spring 2013

Prerequisite: SPAN 253W

SWA 001

Elementary Swahili I (4) Listening, speaking, reading, writing Swahili: an introduction for beginners; basic structures and vocabulary; cultural elements.

Effective: Spring 1995

SWA 002

Elementary Swahili II (4) Listening, speaking, reading, and writing Swahili; structures and vocabulary; cultural elements.

Effective: Spring 1995

Prerequisite: SWA 001

SWA 003

Intermediate Swahili (4) Further development of listening, speaking, reading, and writing skills in Swahili: structures and

vocabulary; cultural elements.

Effective: Spring 1995

Prerequisite: SWA 002

UKR 001

Elementary Ukrainian I (4) Reading, writing, and speaking Ukrainian.

Effective: Summer 1991

UKR 002

Elementary Ukrainian II (4) Reading, writing, and speaking Ukrainian.

Effective: Summer 1991

Prerequisite: UKR 001

UKR 003

Intermediate Ukrainian (4) Reading, writing, and speaking Ukrainian.

Effective: Summer 1991

Prerequisite: UKR 002

B.A. Degree Requirements: Other Cultures

181 Courses

A&A 100 (GA;IL)

Introduction to International Arts (3) An interdisciplinary, multicultural introduction to the arts of the world.
Effective: Summer 2005

AF AM 250 (HIST 250) (GH;IL)

Introduction to the Modern Caribbean (3) A survey course which, explores the historical evolution and emergence of the modern Caribbean.
Effective: Fall 2012

AFR 110 (GS;IL)

Introduction to Contemporary Africa (3) Consideration of influences and forces shaping modern African society; analysis of current local and global problems and issues facing Africa.
Effective: Fall 2012

AFR 110U (GS;IL)

Introduction to Contemporary Africa (3) Consideration of influences and forces shaping modern African society; analysis of current local and global problems and issues facing Africa.
Effective: Fall 2016 Ending: Fall 2016

AFR 191 (HIST 191) (GH;IL)

Early African History (3) Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750.
Effective: Fall 2012

AFR 202 (WMNST 202) (GS;IL)

Gender Dynamics in Africa (3) Critical analysis of multidisciplinary research on relations between men and women in Africa and critique of Western feminist theories.
Effective: Fall 2012

AFR 335 (ART H 335) (IL)

African Art (3) Introduction to the visual arts of Africa, including contemporary African art and the influence of African art outside Africa.
Effective: Fall 2013

AFR 443 (PL SC 443) (IL)

Ethnic Conflict in Africa (3) This course explores the various causes and impacts of ethnic conflicts in the African context.
Effective: Spring 2013

Prerequisite: AF AM 100 AFR 110 PL SC 001 PL SC 003 PL SC 007 PL SC 014 PL SC 017 PL SC 020 or AFRAS 301

AFR 446 (ART H 446) (IL)

Topics in African Art (3 per semester/maximum of 9) Topics vary from "Arts of Eastern and Southern Africa" to "Art of West Africa."
Effective: Spring 2014

Prerequisite: 3 credits of Art History

AFR 447 (ART H 447) (IL)

Topics in the Art of the African Diaspora (3 per semester/maximum of 6) Selected topics in arts of the African Diaspora (South America, Caribbean, USA) including masquerades, textiles, architecture and other art forms.
Effective: Spring 2014

Prerequisite: 3 credits of Art History

ANTH 008 (GS;IL)

Aztecs, Mayas, and Incas (3) Comparative survey of the development of the pre-Columbian Latin American civilizations.
Effective: Summer 2005

ANTH 009 (GS;IL)

Rise of Civilization in the Old World (3) Evolution of Old World complex societies, especially the first great civilizations of Mesopotamia, Egypt, China, and the Indus Valley.
Effective: Spring 2006

ANTH 011 (GS;IL)

Introductory North American Archaeology (3) Introduction to archaeology of the North American Indians; sites, methods, and results of research interpreted in cultural history.
Effective: Summer 2005

ANTH 045 (GS;US;IL)

Cultural Anthropology (3) Beginnings of human culture; economic life, society, government, religion, and art among traditional peoples.
Effective: Summer 2005

ANTH 045U (GS;US;IL)

Cultural Anthropology (3) Beginnings of human culture; economic life, society, government, religion, and art among traditional peoples.

Effective: Spring 2016

ANTH 120 (GS;IL)

First Farmers (3) Cross-cultural comparison of the origins of plant and animal domestication and the earliest farming societies.

Effective: Summer 2013

ANTH 146 (GS;US)

North American Indians (3) An introduction to the cultures of the indigenous peoples of North America, north of Mexico, and the effect of contact.

Effective: Spring 2006

ANTH 152

Hunters and Gatherers (3) A comparative study of hunter/gatherer societies using both archaeological and ethnographic evidence.

Effective: Fall 1986

ANTH 220 (GA;GH;IL)

Anthropology and Art/facts (3) This course examines anthropological approaches to the study of art works, their production, and function in diverse human societies, both past and present.

Effective: Summer 2012

ANTH 221 (GS;IL)

The Ancient Maya (3) The Maya and their neighbors: Origin and Evolution of Classic Maya civilization.

Effective: Spring 2012

Prerequisite: any anthropology course on 100 level or below

ANTH 223 (GS;IL)

European Prehistory (3) The prehistory of European societies from the Upper Palaeolithic to the Iron Age.

Effective: Summer 2013

Prerequisite: 3 credits in 100 level or below ANTH course

ANTH 420 (J ST 420)

Archaeology of the Near East (3) Culture of the Near East and India from Paleolithic times through the Bronze Age.

Effective: Summer 1999

Prerequisite: ANTH 008 ANTH 009 ANTH 011 or ANTH 012

ANTH 422

Meso-American Archaeology and Ethnography (3) Survey of ethnohistorical and ethnographic patterns of Meso-American society; origin and development of ancient civilization in Mexico, Guatemala, and Honduras.

Effective: Spring 1999

Prerequisite: ANTH 008 ANTH 009 ANTH 011 or ANTH 012

ANTH 423

The Evolution of American Indian Culture (3) Historic and archaeological sources used to trace American Indian lifestyles from the first immigrants to the period of Euro-American contact.

Effective: Spring 1999

Prerequisite: 3 credits in anthropology

ANTH 424

Andean Ethnology and Archaeology (3) Cultures of the Andes from earliest settlements to Inka Empire; includes discussion of life in modern Andean communities.

Effective: Spring 2002

Prerequisite: ANTH 002 ANTH 045

ANTH 435 (IL)

Ancient Economy (3) The course examines the comparative organization and development of ancient economies in both the Old and New Worlds.

Effective: Summer 2013

ANTH 440

South American Tribal Societies (3) Ethnographic survey of tribal societies in South America. Special emphasis on non-Andean area.

Effective: Fall 1986

ANTH 453

Anthropology of Religion (3) Traditional and modern religions and historical and contemporary religious movements from an anthropological perspective.

Effective: Fall 2003

Prerequisite: ANTH 001 or ANTH 045

APLNG 427 (CHNS 427) (IL)

Chinese Language, Culture and Society (3) The study of Chinese language and culture and a perspective on the way of life in contemporary Chinese society.

Effective: Spring 2016

Prerequisite: ASIA 100 or equivalent

ARAB 110 (GH;IL)

Arab Language, Cultures, and Current Topics (3) Fourth-semester Modern Standard Arabic: study of cultures through authentic discourse, texts, film; development of reading, writing, listening, speaking skills.

Effective: Summer 2010

Prerequisite: ARAB 003 or permission of program

ART H 120 (GA;IL)

Asian Art and Architecture (3) A selective overview of the art and architecture of India, Southeast Asia, China, Korea, and Japan.

Effective: Summer 2005

ART H 130 (GA;US;IL)

Art of Africa, Oceania, and the Americas (3) A selective overview of the indigenous art of Africa, Oceania and the Americas.

Effective: Spring 2013

ART H 140 (GA;IL)

Introduction to the Art and Architecture of the Mayas, Aztecs, and Incas (3) This course examines the artistic and architectural production of Pre-Columbian Mesoamerica and the Andes.

Effective: Spring 2016

ART H 301 (GA;IL)

Egyptian and Mesopotamian Art (3) Art of the Ancient Near East, including Egypt, Mesopotamia, and neighboring civilizations.

Effective: Spring 2006

ART H 315 (ASIA 315) (GA;IL)

Architecture and Art of South and Southeast Asia (3) Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present.

Effective: Summer 2010

ART H 320 (GA;IL)

Chinese Art (3) A general survey of the great periods of Chinese art from the Shang dynasty until the modern period.

Effective: Summer 2005

ART H 330 (GA;IL)

Islamic Architecture and Art (3) Survey of the art and architecture of Islamic lands from the late seventh century until the eighteenth century.

Effective: Summer 2005

ART H 335 (AFR 335) (GA;IL)

African Art (3) Introduction to the visual arts of Africa, including contemporary African art and the influence of African art outside Africa.

Effective: Fall 2013

ART H 440 (ASIA 440) (IL)

Monuments of Asia (3-9 per semester/maximum of 9) An exploration of major Asian sites and monuments through a focus on their historical and cultural significance.

Effective: Summer 2012

Prerequisite: ART H 100 or ART H 120 or ART H 315 or ART H 320 or ART H 330

ART H 445 (IL)

Oceanic Art (3) Survey of the arts of Oceania (Polynesia, Micronesia, Melanesia), including masks, sculpture, textiles, architecture and other art forms.

Effective: Summer 2012

Prerequisite: 3 credits of Art History

ART H 446 (AFR 446) (IL)

Topics in African Art (3 per semester/maximum of 9) Topics vary from "Arts of Eastern and Southern Africa" to "Arts of West Africa."

Effective: Spring 2014

Prerequisite: 3 credits of Art History

ART H 447 (AFR 447) (IL)

Topics in the Art of the African Diaspora (3 per semester/maximum of 6) Selected topics in arts of the African Diaspora (South America, Caribbean, USA) including masquerades, textiles, architecture and other art forms.

Effective: Spring 2014

Prerequisite: 3 credits of Art History

ART H 460 (IL)

Art and Empire: Aztec, Inca and Spanish (3) This course is a comparative study of the artistic production used in Aztec, Inca and Spanish empires.

Effective: Summer 2012

Prerequisite: 3 credits of ART H

ART H 462 (IL)

Studies in Latin American Art (3 per semester/maximum of 6) Specific studies of the visual and material culture created in Latin America from the colonial through the modern era.

Effective: Summer 2012

Prerequisite: 3 credits of Art History

ASIA 003 (RL ST 003) (GH;US;IL)

Introduction to the Religions of the East (3) Religious experience, thought, patterns of worship, morals, and institutions in relation to culture in Eastern religions.

Effective: Spring 2015

ASIA 004 (CMLIT 004) (GH;IL)

Introduction to Asian Literatures (3) Comparative interpretations of narrative, drama, lyric, and other writings from East Asia and other regions, viewed as world literature.

Effective: Fall 2010

ASIA 100 (GH;IL)

What is Asia? (3) An introduction to the history, literatures, politics, and cultures of Asia.

Effective: Fall 2012

ASIA 104 (RL ST 104) (GH;US;IL)

Introduction to Buddhism (3) A general survey of the basic doctrine, practice, and historical development of Hinayana and Mahayana Buddhism.

Effective: Spring 2015

ASIA 171 (HIST 171) (GH;IL)

Introduction to South Asian History 2: Early Modern to Contemporary (3) An introduction to South Asian history from early modern to contemporary times.

Effective: Spring 2015

ASIA 174 (HIST 174) (GH;IL)

The History of Traditional East Asia (3) Comparative cultural, institutional, and social history of traditional China and Japan to their contact with the industrialized West.

Effective: Fall 2016

ASIA 175 (HIST 175) (GH;IL)

The History of Modern East Asia (3) Survey of modern East Asian history and civilizations, from the nineteenth century to roughly the present day.

Effective: Fall 2016

ASIA 181 (RL ST 181) (IL)

Introduction to the Religions of China and Japan (3) A survey of the history, philosophy, and cultural impact of the major Far Eastern religions: Confucianism, Taoism, Buddhism, and Shinto.

Effective: Spring 2015

ASIA 183 (HIST 183) (GH;IL)

Gender, Family, and Society in East Asia (3) Investigates the history of gender, family, love, and sex in East Asia.

Effective: Summer 2012

ASIA 184 (HIST 184) (GH;IL)

Society and Culture in the Pacific War (3) Examines the role of society and culture in the Pacific War's causes, contexts, realities, and aftermath.

Effective: Summer 2012

ASIA 200 (GH;IL)

What Are Asian Languages? (3) Introduction to the interrelated notions of language, interaction, and culture centering on regions and languages covered in Asian Studies.

Effective: Spring 2015

ASIA 315 (ART H 315) (GA;IL)

Architecture and Art of South and Southeast Asia (3) Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present.

Effective: Summer 2010

ASIA 404 (CMLIT 404) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan.

Effective: Fall 2010

Prerequisite: 3 credits in literature or related field appropriate to this course

ASIA 404Y (CMLIT 404Y) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan, taught with focus on written analysis and interpretation.

Effective: Summer 2013

ASIA 405

Seminar in Asian Studies (3-6 per semester/maximum of 6) Advanced seminar in Asian Studies

Effective: Summer 2013

Prerequisite: ASIA 100

ASIA 405Y (IL)

Seminar in Asian Studies (3-6 per semester/maximum of 6) An advanced, writing-focused seminar in Asian Studies.

Effective: Fall 2009

Prerequisite: ASIA 100

ASIA 440 (ART H 440) (IL)

Monuments of Asia (3-9 per semester/maximum of 9) An exploration of major Asian sites and monuments through a focus on their historical and cultural significance.

Effective: Summer 2012

Prerequisite: ART H 100 or ART H 120 or ART H 315 or ART H 320 or ART H 330

ASIA 463 (PL SC 463) (IL)

Government and Politics of China (3) This course will present an overview of modern Chinese politics since 1949.

Effective: Spring 2016

Prerequisite: PL SC 003 PL SC 014 PL SC 022 or ASIA 100

ASIA 483 (HIST 483) (IL)

Middle China (3) The social, political, and cultural issues and developments from the 8th to 16th century.

Effective: Spring 2015

Prerequisite: HIST 174

ASIA 485Y (HIST 485Y) (IL)

China's Last Empire: The Qing Dynasty, 1644-1911 (3) China from 1644 founding of Qing dynasty to 1911 fall; Chinese society and institutions, imperialism and China's internal diversity.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H

ASIA 486 (HIST 486) (IL)

China in Revolution (3) China from 1900 to the present; nationalism, cultural change; development of communism.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H

ASIA 489 (HIST 489, PL SC 486) (IL)

International Culture in East Asia (3) Study of the role of culture in East Asian regional and East-West international relations.

Effective: Summer 2013

Prerequisite: any one of the following: HIST 172 HIST 174 HIST 175 HIST 480 HIST 481 HIST 483 HIST 484 HIST 485 HIST 486

CAMS 012 (J ST 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

CAMS 105 (GH;IL)

History of the Ancient Near East (3) History of the Ancient Near East from the end of the Neolithic to the Hellenistic period.

Effective: Summer 2005

CAMS 109Y (GH;IL)

Writing Systems of the World (3) Writing intensive overview of the world's writing systems throughout history.

Effective: Spring 2007

CAMS 115 (GH;IL)

Literature of the Ancient Near East (3) Reading and study of literary works from the Ancient Near East, especially from Mesopotamia and Ancient Egypt.

Effective: Fall 2016

CAMS 122 (J ST 122, RL ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

CAMS 123 (J ST 123, RL ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

CAMS 153 (J ST 153, RL ST 153) (GH;IL)

Dead Sea Scrolls (3) Examines the discovery, contents, and interpretations of the Dead Sea Scrolls, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

CAMS 160 (J ST 160, RL ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.

Effective: Summer 2014

CAMS 250U (GH;IL)

Honors Classics in Literature and Film (3) This honors course explores the Classical Tradition as it thrives in the literature of later epochs and film.

Effective: Summer 2010

CAMS 405 (IL)

Law & Economy in the Ancient Near East (3) This course is an overview of the legal and economic texts and institutions in the Ancient Near East.

Effective: Spring 2009

Prerequisite: 6 credits in any undergraduate CAMS courses.

CAMS 471

Sumerian (3) Introduction to the Sumerian language and the cuneiform writing system.

Effective: Spring 2009

Prerequisite: 6 credits in any undergraduate CAMS course.

CAMS 472

Akkadian (3) Introduction to the Akkadian language (Babylonian & Assyrian) and the cuneiform writing system.

Effective: Spring 2009

Prerequisite: 6 credits in any undergraduate CAMS courses

CAMS 481 (IL)

Introduction to Middle Egyptian & Hieroglyphics (3) An introduction to the language and script of Ancient Egypt, familiarizing the student with grammar, syntax and lexicon.

Effective: Summer 2012

Prerequisite: 6 credits of any CAMS course

CHNS 120 (GH;IL)

Introduction to Chinese Literature and Culture (3) Chinese cultural productions, classical through contemporary; literature and film; changing cultural settings in multiple Chinese-speaking locations. Taught in English.

Effective: Spring 2010

CHNS 402 (IL)

Level Three Chinese B (4) Readings in representative works of traditional and modern literature; practice in composition; study of aspects of Chinese culture.

Effective: Spring 2011

Prerequisite: CHNS 401 OR EQUIVALENT

CHNS 427 (APLNG 427) (IL)

Chinese Language, Culture and Society (3) The study of Chinese language and culture and a perspective on the way of life in contemporary Chinese society.

Effective: Spring 2016

Prerequisite: ASIA 100 or equivalent

CHNS 452 (IL)

Contemporary China: Culture and Trends (3 per semester/maximum of 6) Survey of aspects of the contemporary Chinese-speaking world. Includes readings from Chinese newspapers, magazines, and fiction. Topics may vary each semester.

Effective: Spring 2010

Prerequisite: CHNS 401

CHNS 453 (IL)

Chinese Film (3 per semester/maximum of 6) Selected films and directors representing various aspects of Chinese culture and cinema. Topics may vary each semester. Taught in Chinese.

Effective: Spring 2010

Prerequisite: CHNS 401

CHNS 454 (IL)

Introduction to Classical Chinese (3 per semester/maximum of 6) Basic patterns and structures of Classical Chinese to the first millennium B.C. to the 19th century.

Effective: Spring 2010

Prerequisite: CHNS 401 or equivalent (such as study abroad credit)

CHNS 455 (IL)

Masterpieces of Traditional Chinese Literature (3) Survey of traditional Chinese literature, including poetry, historical narratives, philosophical texts, and drama and novel.

Effective: Spring 2010

Prerequisite: CHNS 401 or equivalent

CMLIT 003 (GH;IL)

Introduction to African Literatures (3) Comparative analysis of drama, essay, novel, poetry, and stories from traditional oral forms to contemporary expressions of African literary styles.

Effective: Summer 2005

CMLIT 004 (ASIA 004) (GH;IL)

Introduction to Asian Literatures (3) Comparative interpretations of narrative, drama, lyric, and other writings from East Asia and other regions, viewed as world literature.

Effective: Fall 2010

CMLIT 010 (GH;IL)

World Literatures (3) The development of literature around the world--from epic, legend, lyric, etc. in the oral tradition to modern written forms.

Effective: Fall 2015

CMLIT 108 (GH;IL)

Myths and Mythologies (3) World mythology: myths primarily of non-Western cultures, based on selected areas and traditions around the world.

Effective: Summer 2005

CMLIT 109 (GH;US;IL)

Native American Myths, Legends, and Literatures (3) Myths, legends, and literatures of Native American cultures.

Effective: Spring 2006

CMLIT 111 (GH;IL)

Introduction to Literatures of India (3) Narrative, lyric, religious, oral, and dramatic literature, as well as film from India

studied in translation from a global perspective.

Effective: Summer 2005

CMLIT 116 (J ST 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.

Effective: Summer 2015

CMLIT 143 (GH;US;IL)

Human Rights and World Literature (3) Human rights violations discussed in tandem with their literary representation, presented in a global and comparative context.

Effective: Summer 2010

CMLIT 404 (ASIA 404) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan.

Effective: Spring 2011

Prerequisite: 3 credits in literature or related field appropriate to this course

CMLIT 422 (IL)

African Drama (3) Traditional and popular drama forms; modern anglophone and francophone drama; nationalism and social criticism in contemporary African drama.

Effective: Spring 2006

CMLIT 423 (IL)

African Novel (3) From traditional oral narratives to modern autobiographical, historical, satirical, sociological, and allegorical forms; novelist as social critic.

Effective: Spring 2006

CMLIT 446 (IL)

Postcolonial Literature and Culture (3) Postcolonial literature and theory in a comparative and international context.

Effective: Summer 2010

Prerequisite: 3 credits in the study of literature

CMLIT 449 (IL)

Literary Cultures of Islam (3) Comparative discussion of the literary cultures of Islam from the seventh century to the present.

Effective: Summer 2010

Prerequisite: 3 credits in the study of literature

FR 458 (IL)

African Literature of French Expression (3) Genesis of Franco-African literature in the 1930s; phases of the negritude movement; colonial and national literature.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

GEOG 040 (GS;IL)

World Regional Geography (3) Introduction to the world as an interdependent community built from unique and independent regions and nations.

Effective: Spring 2012

GEOG 123 (GS;IL)

Geography of Developing World (3) Patterns of poverty in poor countries; conventional and non-conventional explanations; focus on solutions; case studies of specific regions.

Effective: Spring 2007

GEOG 124 (GS;IL)

Elements of Cultural Geography (3) Locational analysis of changes in non-Western cultures. Problems of plural societies, economic development, population growth, and settlement.

Effective: Summer 2005

GEOG 444 (AFR 444)

African Resources and Development (3) Ecological and cultural factors in the geography of Africa; natural resources and development.

Effective: Fall 2015

Prerequisite: GEOG 010 or GEOG 020 or GEOG 030 or GEOG 123 or GEOG 124 or GEOG 130 or EARTH 105 or AFR 105 or AFR 110

GLIS 400Y (IL)

Seminar in Global and International Studies (3) An upper-division capstone seminar focusing critical themes in Global and International Studies with a focus on the writing of a senior thesis for the Global Studies Major.

Effective: Spring 2016

Prerequisite: GLIS 101 GLIS 102

HIST 010 (GH;IL)

World History I (3) Human origins; early civilizations; major political and intellectual developments on all continents; cultural interrelationships to 1500.

Effective: Summer 2005

HIST 011 (GH;IL)

World History II (3) Social, economic, and political evolution of societies and cultures from 1500 to the present.

Effective: Summer 2005

HIST 119 (GH;IL)

Gender and History (3) Survey of the development of gender roles in Western societies from the prehistoric era to the early modern period.
Effective: Spring 2008

HIST 141 (GH;IL)

Medieval and Modern Russia (3) Introductory survey, including political, social, economic, and cultural development of Kievan, Muscovite, and Imperial Russia.
Effective: Spring 2006

HIST 142 (GS;IL)

History of Communism (3) Marxism; Leninism and evolution of the Soviet Union; formation and development of the Communist bloc; impact of Chinese Communism.
Effective: Spring 2006

HIST 171 (ASIA 171) (GH;IL)

Introduction to South Asian History 2: Early Modern to Contemporary (3) An introduction to South Asian history from early modern to contemporary times.
Effective: Spring 2015

HIST 173 (GH;IL)

Vietnam in War and Peace (3) Rise of nationalism and communism; origins of conflict; United States involvement; impact on postwar regional and international politics; contemporary Vietnam.
Effective: Spring 2006

HIST 174 (ASIA 174) (GH;IL)

The History of Traditional East Asia (3) Comparative cultural, institutional, and social history of traditional China and Japan to their contact with the industrialized West.
Effective: Fall 2016

HIST 175 (ASIA 175) (GH;IL)

The History of Modern East Asia (3) Survey of modern East Asian history and civilizations, from the nineteenth century to roughly the present day.
Effective: Fall 2016

HIST 178 (GH;IL)

Latin-American History to 1820 (3) Conquest of the New World, development of colonial institutions, impact on native cultures, and origins of independence movements.
Effective: Summer 2005

HIST 181 (J ST 181) (GH;IL)

Introduction to the Middle East (3) Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918.
Effective: Fall 2015

HIST 183 (ASIA 183) (GH;IL)

Gender, Family, and Society in East Asia (3) Investigates the history of gender, family, love, and sex in East Asia.
Effective: Summer 2012

HIST 184 (ASIA 184) (GH;IL)

Society and Culture in the Pacific War (3) Examines the role of society and culture in the Pacific War's causes, contexts, realities, and aftermath.
Effective: Summer 2012

HIST 190 (J ST 190, RL ST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.
Effective: Summer 2015

HIST 191 (AFR 191) (GH;IL)

Early African History (3) Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750.
Effective: Fall 2012

HIST 471Y (RL ST 471Y) (IL)

Classical Islamic Civilization, 600-1258 (3) Pre-Islamic Arabia; Muhammad; Arab conquests; Islamic beliefs and institutions; literary, artistic, and scientific achievements; relations with Europe; breakdown of unity.
Effective: Fall 2006

HIST 472 (J ST 472) (IL)

The Ottoman Empire and Other Muslim States (3) Turkish and Mongol invasions; Mamluks; Ottoman expansion and institutions; Safavid Persia; disintegration and reform; emergence of modern Turkey and Iran.
Effective: Fall 2015
Prerequisite: HIST 181

HIST 473 (J ST 473) (IL)

The Contemporary Middle East (3) Political, economic, and social changes in Turkey, Iran, Israel, and the Arab countries in the twentieth century; Arab-Israeli conflict.
Effective: Fall 2015

HIST 479 (IL)

History of Imperialism and Nationalism in Africa (3) Theories and types of imperialism; varied patterns of colonial administration; initial African responses; nationalism; decolonization and independence.

Effective: Spring 2006

Prerequisite: HIST 191

HIST 483 (ASIA 483) (IL)

Middle China (3) The social, political, and cultural issues and developments from the 8th to 16th century.

Effective: Spring 2015

Prerequisite: HIST 174

HIST 485Y (ASIA 485Y) (IL)

China's Last Empire: The Qing Dynasty, 1644-1911 (3) China from 1644 founding of Qing dynasty to 1911 fall; Chinese society and institutions, imperialism and China's internal diversity.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H (Honors in East Asian history)

HIST 486 (ASIA 486) (IL)

China in Revolution (3) China from 1900 to the present; nationalism, cultural change; development of communism.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H (Honors in East Asian History)

HIST 489 (PL SC 486, ASIA 489) (IL)

International Culture in East Asia (3) Study of the role of culture in East Asian regional and East-West international relations.

Effective: Summer 2013

Prerequisite: any one of the following: HIST 172 HIST 174 HIST 175 HIST 480 HIST 481 HIST 483 HIST 484 HIST 485 HIST 486

INART 062 (GA;US;IL)

West African and African American Arts: from the 1960s to the present (3) An introduction to West African and African American Arts from the 1960s to the present.

Effective: Summer 2014

J ST 012 (CAMS 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

J ST 106 (RL ST 106) (GH;IL)

Mysticism and Kabbalah (3) A survey of the history, philosophy, and cultural impact of various mystical traditions in relation to world religions.

Effective: Fall 2015

J ST 116 (CMLIT 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.

Effective: Summer 2015

J ST 122 (CAMS 122, RL ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

J ST 123 (CAMS 123, RL ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of the ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

J ST 153 (CAMS 153, RL ST 153) (GH;IL)

Dead Sea Scroll (3) Examines the discovery, contents, and interpretations of the Dead Sea Scroll, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

J ST 160 (CAMS 160, RL ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.

Effective: Summer 2014

J ST 181 (HIST 181) (GH;IL)

Introduction to the Middle East (3) Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918.

Effective: Fall 2015

J ST 190 (HIST 190, RL ST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.

Effective: Summer 2015

J ST 472 (HIST 472)

The Ottoman Empire and Other Muslim States (3) Turkish and Mongol invasions; Mamluks; Ottoman expansion and institutions; Safavid Persia; disintegration and reform; emergence of modern Turkey and Iran.

Effective: Fall 2015

Prerequisite: HIST 181

J ST 473 (HIST 473) (IL)

The Contemporary Middle East (3) Political, economic, and social changes in Turkey, Iran, Israel, and the Arab countries in the twentieth century; Arab-Israeli conflict.

Effective: Fall 2015

JAPNS 120 (GH;IL)

Japanese Literature in Its Cultural Context (3) Japanese literature and film from classical through contemporary times, with attention to changing cultural settings. Taught in English.

Effective: Spring 2010

JAPNS 120W (GH;IL)

Japanese Literature in its Cultural Context (3) Japanese Literature in its Cultural Context: Japanese literature and Culture from Classical through contemporary times; writing intensive.

Effective: Summer 2013

JAPNS 121 (GH;IL)

Japanese Film and New Media (3) Survey of Japanese film and new media in the twentieth century and beyond, with attention to changing cultural settings. Taught in English.

Effective: Spring 2010

JAPNS 402 (IL)

Level Three Japanese B (4) Exclusively for study abroad returnees. To further develop Japanese proficiency in speaking, listening, reading, and writing.

Effective: Spring 2011

Prerequisite: JAPNS 401

JAPNS 410 (IL)

Japanese Through Manga (3) The course aims to expand students' knowledge and application of Japanese language beyond elementary and intermediate textbooks through the use of manga (graphic novels).

Effective: Summer 2013

Prerequisite: JAPNS 110 or equivalent

JAPNS 421 (IL)

Courtly Japan (3) Focused study of aristocratic society and culture of Heian period Japan.

Effective: Spring 2012

Prerequisite: JAPNS 120 JAPNS 121 or HIST 172

JAPNS 422 (IL)

War and the Warrior in Japan (3) Survey of the role of warfare and the warrior in Japan, with attention to changing cultural settings. Taught in English.

Effective: Summer 2011

Prerequisite: JAPNS 120 or JAPNS 121 or HIST 172

JAPNS 424 (IL)

Traveling Voices (3) Transnational Writings of Japan: from Modern to Contemporary Eras .

Effective: Spring 2012

Prerequisite: JAPNS 120 JAPNS 121 or HIST 172

OLEAD 410 (IL)

Leadership in a Global Context (3) This course explores the science and practice of leadership around the globe through pertinent scholarly literature and related instructional resources.

Effective: Spring 2015

Prerequisite: OLEAD 100

PL SC 022 (GS;IL)

Politics of the Developing Areas (3) The impact of colonialism, nationalism, and development policy on the political culture, structure, and transformation of post-colonial regimes.

Effective: Spring 2010

PL SC 132 (GS;IL)

The Politics of International Intolerance (3) Introductory course emphasizing psychological, historical, and political aspects of global intolerance towards minorities.

Effective: Fall 2007

PL SC 443 (AFR 443) (IL)

Ethnic Conflict in Africa (3) This course explores the various causes and impacts of ethnic conflicts in the African context.

Effective: Spring 2013

Prerequisite: AF AM 100 AFR 110 PL SC 001 PL SC 003 PL SC 007 PL SC 014 PL SC 017 PL SC 020 or AFRAS 301

PL SC 454 (AFR 454) (IL)

Government and Politics of Africa (3) Contemporary African politics, institutions, and ideologies; patterns of change, social forces, and nation building in selected African states.

Effective: Fall 2012

Prerequisite: 3 credits from: AFR 110 PL SC 003 PL SC 020 or PL SC 022

PL SC 458

Government and Politics of East Asia (3) This course examines the political systems, institutions, and leadership of East Asian countries.

Effective: Fall 2016

Prerequisite: 3 credits from PL SC 003 PL SC 020 PL SC 022

PL SC 463 (ASIA 463) (IL)

Government and Politics of China (3) This course will present an overview of modern Chinese politics since 1949.

Effective: Spring 2016

Prerequisite: PL SC 003 PL SC 014 PL SC 022 or ASIA 100

PL SC 468

Politics and the Media (3) An examination of how politics and public policy affect and are shaped by the news media, as a political institution, in America.

Effective: Spring 2015

Prerequisite: PL SC 001 PL SC 003 PL SC 022 PL SC 409 CAS 409 CAS 175 CAS 201 CAS 272 COMM 100 or COMM 110

PL SC 486 (HIST 489, ASIA 489) (IL)

International Culture in East Asia (3) Study of the role of culture in East Asian regional and East-West international relations.

Effective: Summer 2013

Prerequisite: any one of the following: HIST 172 HIST 174 HIST 175 HIST 480 HIST 481 HIST 483 HIST 484 HIST 485 HIST 486

PSYCH 232 (GS;US;IL)

Cross-Cultural Psychology (3) This course examines how ethnic and cultural background influences patterns of human thought and behavior.

Effective: Spring 2007

Prerequisite: PSYCH 100

RL ST 001 (GH;US;IL)

Introduction to World Religions (3) An historical and comparative survey of the principal beliefs and practices of the world's major religions.

Effective: Summer 2005

RL ST 003 (ASIA 003) (GH;US;IL)

Introduction to the Religions of the East (3) Religious experience, thought, patterns of worship, morals, and institutions in relation to culture in Eastern religions.

Effective: Spring 2015

RL ST 101 (GH;IL)

Comparative Religion (3) Comparative or historical analysis of religious factors--worship, theology, ethics, scriptures, etc., in two or more religious traditions.

Effective: Summer 2005

RL ST 103 (ASIA 103) (GH;US;IL)

Introduction to Hinduism (3) Historical development of Hinduism to the present.

Effective: Spring 2015

RL ST 104 (ASIA 104) (GH;US;IL)

Introduction to Buddhism (3) A general survey of the basic doctrine, practice, and historical development of Hinayana and Mahayana Buddhism.

Effective: Spring 2015

RL ST 106 (J ST 106) (GH;IL)

Mysticism and Kabbalah (3) A survey of the history, philosophy, and cultural impact of various mystical traditions in relation to world religions.

Effective: Fall 2015

RL ST 107 (GH;US;IL)

Introduction to Islam (3) Community and message of the early movement; development of authoritative structures and traditions; proliferation of sects; theology and creeds; mysticism.

Effective: Spring 2006

RL ST 116 (GH;IL)

Muslims in America (3) This course is a study of Muslims from multiple racial, cultural, and national perspectives; it explores what it means to be a Muslim in America.

Effective: Summer 2010

RL ST 122 (CAMS 122, J ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

RL ST 123 (CAMS 123, J ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

RL ST 153 (CAMS 153, J ST 153) (GH;IL)

Dead Sea Scrolls (3) Examines the discovery, contents, and interpretations of the Dead Sea Scrolls, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

RL ST 160 (CAMS 160, J ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.
Effective: Summer 2014

RL ST 181 (ASIA 181) (IL)

Introduction to the Religions of China and Japan (3) A survey of the history, philosophy, and cultural impact of the major Far Eastern religions: Confucianism, Taoism, Buddhism, and Shinto.
Effective: Spring 2015

RL ST 190 (J ST 190, HIST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.
Effective: Summer 2015

RL ST 408 (US;IL)

Hindu Studies (3) Special topics in Hindu studies.
Effective: Summer 2005
Prerequisite: 3 credits in religious studies

RL ST 409 (US;IL)

Buddhist Studies (3) Special topics in Buddhist studies.
Effective: Spring 2006
Prerequisite: 3 credits in religious studies

RL ST 471Y (HIST 471Y) (IL)

Classical Islamic Civilization, 600-1258 (3) Pre-Islamic Arabia; Muhammad; Arab conquest; Islamic beliefs and institutions; literary, artistic, and scientific achievements; relations with Europe; breakdown of unity.
Effective: Spring 2006

RL ST 483 (ASIA 487) (IL)

Zen Buddhism (3) The development and current state of Zen Buddhist thought and practice.
Effective: Fall 2016

SOC 019 (GS)

Sociology of Popular Culture (3) Students are introduced to the sociological study of how popular culture is produced, consumed, and experienced.
Effective: Spring 2014

SPAN 131 (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.
Effective: Summer 2005

SPAN 131Y (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.
Effective: Summer 2005

SPAN 476

Masterpieces of Spanish American Literature (3) Reading, analysis, and discussion of selected major works representative of Spanish American prose and poetry.
Effective: Spring 2013
Prerequisite: SPAN 253W

WMNST 200 (GS;IL)

Global Feminisms (3) This course examines the diverse contents and forms of "feminism" worldwide, emphasizing women's engagement with unequal, unjust, impacts of globalization.
Effective: Summer 2012

WHAT IS GENERAL EDUCATION?

The inclusion of General Education in every degree program reflects Penn State's deep conviction that successful, satisfying lives require a wide range of skills and knowledge. These skills include the ability to reason logically and quantitatively and to communicate effectively; an understanding of the sciences that makes sense of the natural environment; a familiarity with the cultural movements that have shaped societies and their values; and an appreciation for the enduring arts that express, inspire, and continually change these values. General Education, in essence, augments and rounds out the specialized training students receive in their majors and aims to cultivate a knowledgeable, informed, literate human being.

For more information, see gened.psu.edu.

Penn State's General Education program is designed to enable students to:

- acquire knowledge through critical information gathering, including reading and listening, computer-assisted searching, and scientific experimentation and observation;
- analyze and evaluate, where appropriate in a quantitative manner, the acquired knowledge;
- integrate knowledge from a variety of sources and fields;
- make critical judgments in a logical and rational manner;
- develop the skills to maintain health and understand the factors that impinge upon it;
- communicate effectively, both in writing and orally, and using the accepted methods for presentation, organization, and debate particular to their disciplines;
- seek and share knowledge, independently and in collaboration with others;
- gain understanding of international interdependence and cultural diversity and develop consideration for values, lifestyles, and traditions that may differ from their own;
- comprehend the role of aesthetic and creative activities expressing both imagination and experience.

Courses within the structure of General Education become an integral part of the overall educational experience. These courses may be relevant to a major or to an individual's interests. Students are encouraged to consider how a course might be useful to their current interests and goals. An important part of academic planning is working with an academic adviser not only to understand the role of General Education requirements, but also to make sure that course selections complement the academic requirements of a student's specific major.

Components of General Education

The *typical* baccalaureate Penn State academic program requires the completion of between 120 and 130 credits. The General Education requirements are common to all degree programs and compose about one-third of the course work (45 credits). All students must also complete a First-Year Engagement program, courses in United States Cultures and International Cultures, and a writing-across-the-curriculum course as part of their degree program. For simplicity, those courses are included with the General Education program as described in this bulletin. The course selections are designed to provide students with a well-rounded academic experience within an integrated curriculum that allows for individual flexibility. The components of the program are:

- *Skills courses* that help develop quantitative and communication skills.
- *Studies in the Knowledge Domains of the Arts, Humanities, and the Sciences* (including the Health Sciences, Natural Sciences, and the Social and Behavioral Sciences) that provide a broad overview of the world in which we live.
- *First-Year Engagement Programs* that help introduce students to the scholarly community of the University.
- *Writing Intensive* courses of the "Writing Across the Curriculum" component that further enhance writing skills.
- *United States Cultures and International Cultures* that provide opportunities to increase understanding of the relationship between people of different cultures and widen international perspective.

General Education Requirement Descriptions

SKILLS

Writing / Speaking

Courses with the GWS designation satisfy this component.

It is the objective of these courses to teach students to communicate information clearly and set forth their beliefs persuasively both orally and in writing. In particular, it is expected that students become sufficiently proficient in writing, such that their expository prose meets the expectations of educated readers in both form and style.

Quantification

Courses with the GQ designation satisfy this component

The objective of the quantification courses is to teach the students to work with numbers so as to measure space, time, mass, forces, and probabilities; to reason quantitatively; and to apply basic mathematical processes to daily work and everyday living.

KNOWLEDGE DOMAINS

Health and Physical Activity

Courses with the GHA designation satisfy this component

Courses in the Health and Physical Activity area focus on the theory and practice of life span wellness and fitness activities,

and on the knowledge, attitudes, habits, and skills needed to live well. The courses include such diverse topics as diet, exercise, stress management, the wise use of leisure time, alcohol consumption and drug use, sexual health awareness, and safety education. Courses may be knowledge-focused (about aspects of the biological, social, and behavioral aspects of healthful living) or practice-focused (emphasize attitudes, habits, and skills needed to engage in healthful living and can include traditional dance, exercise, and sport activity classes) or integrated in any manner.

Natural Sciences

Courses with the GN designation satisfy this component

The Natural Sciences reveal the order, diversity, and beauty of nature and in so doing enable students to develop a greater appreciation of the world around them. These courses help students to understand the nature of science through exposure to the broad divisions of science--physical science, biological science, earth science, and applied natural science. In these courses the students will be taught how to acquire scientific factual information, to use scientific methodology and to develop an appreciation of the natural world. Students should gain an understanding of how scientists reason and how they draw conclusions and think critically.

Arts

Courses with the GA designation satisfy this component

Courses taught in the area of the Arts are expected to help students understand and appreciate some of the more important creative works, traditions, literature, and history of the arts and architecture. General Education Arts courses aim to teach students to recognize the comprehensive role of arts and architecture as an expression of the cultural values of a society and the need to preserve these expressions for the benefit of future generations.

Through the courses in the Arts area, students should recognize aesthetic values as an integral part of society's essential need and gain lifelong benefits through the acquisition and appreciation of arts-related skills. Students should become conversant with the terminology, techniques, attitudes, ideas, and skills that the arts comprise so as to understand how humankind relates to the arts.

Humanities

Courses with the GH designation satisfy this component

Humanistic studies are divided into four categories:

1. (1) literature,
2. (2) history and culture,
3. (3) advanced language, and
4. (4) philosophy.

The study of the Humanities should develop competency in interpretive understanding of the human condition and of the values inherent in it. This interpretive understanding should evolve into the development of insights and a critical evaluation of the meaning of life, in its everyday details as well as in its historical and universal dimensions. Through this development students should acquire knowledge of and concern for the humanistic values that motivate and inform all humanistic studies.

Social and Behavioral Sciences

Courses with the GS designation satisfy this component

Social and Behavioral Sciences courses develop students' understanding of the diverse personal, interpersonal, and societal forces that shape people's lives and teach them how to approach these subjects through the concepts, principles, and methods of scientific inquiry. The general goal is a theoretical understanding of the interrelationships of the determinants of the organization of human behavior. These courses are expected to introduce students to the scientific analysis of:

1. (1) the forms, practices, and theories of politics;
2. (2) the nature and operation of economic analysis;
3. (3) the interrelationships of social institutions;
4. (4) the dynamics of individual and group behavior and change; and
5. (5) the processes and functions of human communication.

Through the application of the methodologies of the Social and Behavioral Sciences, students should develop an understanding of the multiple nature of causality in social settings. The Social and Behavioral Sciences require a comprehensive, integrative, empirical, and theoretical view of the social world.

Note: Some colleges or majors might require the completion of specific GWS, GQ, GHA, GN, GA, GH, and/or GS courses.

ADDITIONAL REQUIREMENTS

First-Year Engagement Program

The First-Year Engagement Programs are designed to actively involve students in learning, acquaint them with the learning tools and resources available at Penn State and orient them to the scholarly community from the outset of their undergraduate studies in a way that will bridge to later experiences in their chosen majors. In addition, the First-Year Engagement Programs facilitate students' adjustment to the high expectations, demanding workload, increased academic liberties, and other aspects of the transition to college life and introduce them to their responsibilities as members of the University community.

All incoming first-year baccalaureate students are required to complete a First-Year Engagement Program, with a student's campus of enrollment determining whether or not this includes a First-Year Seminar (FYS). All students enrolled in a University Park college, the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan. Other campuses

may require the First-Year Seminar; campuses that no longer require a First-Year Seminar provide students with a first-year engagement experience. First-year baccalaureate students entering Penn State should consult their enrollment home for these requirements.

Courses with the suffix S, T, or X, or PSU abbreviation satisfy a First-Year Seminar requirement.

United States Cultures

Courses with the US designation satisfy this requirement

A course that fulfills the United States Cultures requirement must strive to increase students' understanding of contemporary United States society. Such a course need not focus exclusively on the present and may concern a historical subject.

Courses with the United States Cultures designation will include two or more of the following components and will include those components in the graded evaluation of student performance:

1. Cultivate student knowledge of issues of social identity such as ethnicity, race, class, religion, gender, physical/mental disability, age, or sexual orientation;
2. Convey to students knowledge of different United States values, traditions, beliefs, and customs;
3. Increase student knowledge of the range of United States cultural achievements and human conditions through time;
4. Increase student knowledge of United States social identities not in isolation, but in relation to one another (for example, the interaction of race or gender with socioeconomic status);
5. Introduce students to interpersonal communication and interaction issues among United States cultures.

International Cultures

Courses with the IL designation satisfy this requirement

A course that fulfills the International Cultures requirement must strive to increase student knowledge of the variety of international societies and may deal to some extent with U.S. culture in its international connections. It need not focus exclusively on the present and may, indeed, be a historical subject. Courses with the International Cultures designation will do two or more of the following:

1. Cultivate student knowledge of the similarities and differences among international cultures;
2. Convey to students knowledge of other nations' cultural values, traditions, beliefs, and customs;
3. Increase students' knowledge of the range of international cultural achievements and human conditions through time;
4. Increase students' knowledge of nations and cultures not in isolation, but in relation to one another;
5. Introduce students to interpersonal communication and interaction issues among international cultures.

Writing Across the Curriculum

Courses with the suffix W, M, X, or Y satisfy this requirement

Developing the skill to communicate by means of the written word is extremely important. Courses other than General Education English composition courses emphasize the ability of students to write. Colleges and/or departments have established "W" courses in specific programs. Students are required to complete at least 3 credits of writing-intensive courses offered within their major or college of enrollment.

Typically, "W" courses include writing assignments that relate clearly to the course objectives and serve as effective instruments for learning the subject matter of the course. In writing-intensive courses, assignments are designed to help students investigate the course subject matter, gain experience in interpreting data or the results of research, shape writing for a particular audience, or practice the type of writing associated with a given profession or discipline.

Opportunities for students to receive written feedback from the instructor and to apply the instructor's feedback to their future writing are built into the writing courses. A writing-intensive course may also include peer review of written work, tutorial assistance, instructor conferences, group writing projects, the use of writing or learning centers, teaching assistant feedback, and classroom discussions of assigned readings about writing.

Courses that are designed to develop the students' writing competence are identified by the suffix "W, M, X, or Y" in the Undergraduate Bulletin and the Schedule of Courses. Both baccalaureate and associate degree students complete 3 credits in this area.

Program Structure--Baccalaureate and Associate

The Baccalaureate Degree General Education Program

The baccalaureate degree General Education program consists of 45 credits that are distributed among two General Education components: (1) Skills (15 credits) and (2) Knowledge Domains (30 credits) in the Natural Sciences, Arts, Humanities, Social and Behavioral Sciences, and Health and Physical Activity. Every baccalaureate degree student also completes the First-Year Seminar, United States Cultures and International Cultures, and Writing Across the Curriculum requirements.

A restriction is placed on students in majors that are closely linked to the Knowledge Domains of Natural Sciences, Arts, Humanities, and Social and Behavioral Sciences to ensure that they participate in the full breadth of General Education. These students may not use a course in their academic major to satisfy one of the Knowledge Domains requirements. For example, an Economics major may not use an economics course to fulfill his/her social and behavioral sciences requirement. Also, students may not count courses cross-listed with courses in their major to fulfill one of the General Education Knowledge Domain, e.g., a Theatre major may not register for THEA 208 (GA;US;IL)/AAAS 208 (GA;US;IL) and have it count in the Arts requirement.

SKILLS (15 credits)

Writing/Speaking (9 credits)

Courses with the GWS designation satisfy this component.

Quantification (6 credits)

Courses with the GQ designation satisfy this component. (3-6 credits are selected from mathematics, applied mathematics, and statistics; 3 credits may be selected from computer science or symbolic logic.)

KNOWLEDGE DOMAINS (30 credits)

Health and Physical Activity (3 credits)

Courses with the GHA designation satisfy this component.

Natural Sciences (9 credits)

Courses with the GN designation satisfy this component.

Arts (6 credits)

Courses with the GA designation satisfy this component.

Humanities (6 credits)

Courses with the GH designation satisfy this component.

Social and Behavioral Sciences (6 credits)

Courses with the GS designation satisfy this component.

ADDITIONAL REQUIREMENTS

Baccalaureate degree students must complete one First-Year Seminar (S, T, or X suffix, or PSU abbreviation), 3 credits of United States Cultures (US) and 3 credits of International Cultures (IL), and 3 credits of Writing Across the Curriculum (W, M, X, and Y). These requirements may be completed by designated courses that also meet other degree or General Education requirements.

FLEXIBILITY OF THE BACCALAUREATE DEGREE GENERAL EDUCATION REQUIREMENTS

Penn State wants students to use General Education to experiment and explore, to take academic risks, to discover things they did not know before, and to learn to do things they have not done before. To that end, the General Education program extends the concept of flexibility to all aspects of the degree program.

Students may, with the permission of their adviser and dean's representative:

1. substitute a 200- to 499-level course in an area of General Education for a course found on the General Education list. For example, a student may take a 400-level course in history and use it to meet the General Education requirement satisfied by a comparable lower-level history course.
2. substitute a foreign language at the twelfth credit level of proficiency, as measured by the Penn State foreign language offerings, for 3 credits in any of the categories of General Education. Baccalaureate degree students may substitute study in a foreign/second language at the twelfth credit level of proficiency or higher for any three credits in any of the categories of general education only if those three credits are in language study beyond their degree requirements.*
3. substitute a third course in one of the Knowledge Domains areas of Arts, Humanities, or Social and Behavioral Sciences for a second course in one of the other areas. For example, a student might take 3 courses in the Arts, two courses in the Humanities, and only one course in the Social and Behavioral Sciences. This substitution is often referred to as the 9-6-3 sequence, representing the 9 credits, 6 credits, and 3 credits completed in place of the specified 6-6-6.*
4. meet the United States Cultures (US) and International Cultures (IL) requirement through completion of an experiential learning program or practicum (one-semester or year long) approved by their college dean's office. Approved Penn State Education Abroad Programs may be used to satisfy the International Cultures (IL) requirement.

5. meet the First-Year Seminar (FYS) requirement through completion of a FYS course offered by any unit of the University. Thus, a student who successfully completes a FYS course in one college, prior to transferring to another college, will not be required to complete another FYS. However, since there are various modes of offering a FYS throughout the University, students transferring to a new college may find that a required course that is also a FYS must still be taken.

*Please note: The use of these two substitutions (No. 2 and No. 3 above), either alone or in combination, may not lead to the complete elimination of any area in the skills or knowledge domains categories in the student's General Education program.

* Three credits of United States Cultures (US) and International Cultures (IL), and 3 credits of Writing Across the Curriculum (W, M, X, and Y) may be designated courses that also meet other degree or General Education requirements.

The Associate Degree General Education Program

The associate degree General Education program consists of 21 credits that are distributed among two General Education components: (1) Skills6 credits in courses that develop communicative and quantitative skills; and (2) Knowledge Domains12 credits in the Natural Sciences, Arts, Humanities, and Social and Behavioral Sciences, with an additional 3 credits in any General Education area. Associate degree students have a 3-credit requirement and may choose either a United States Cultures (US) course or an International Cultures (IL) course, and must complete a 3-credit writing intensive course (W). While associate degree students are not required to complete a First-Year Seminar, they are encouraged to participate in such a seminar if the opportunity to do so exists.

A restriction is placed on students in majors that are closely linked to the Knowledge Domains areas of Natural Sciences, Arts, Humanities, and Social and Behavioral Sciences, in order to ensure that they participate in the full breadth of General Education. These students may not use a course in their academic major to satisfy one of the Knowledge Domains area requirements. For example, an Economics major may not use an economics course to fulfill his/her social and behavioral sciences requirement.

SKILLS (6 credits)

Writing/Speaking (3 credits)

Courses with the GWS designation satisfy this component.

Quantification (3 credits)

Courses with the GQ designation satisfy this component. (3 credits are selected from mathematics, applied mathematics, statistics, computer science, or symbolic logic)

KNOWLEDGE DOMAINS (12 credits)

Natural Sciences (3 credits)

Courses with the GN designation satisfy this component.

Arts (3 credits)

Courses with the GA designation satisfy this component.

Humanities (3 credits)

Courses with the GH designation satisfy this component.

Social and Behavioral Sciences (3 credits)

Courses with the GS designation satisfy this component.

SKILLS OR KNOWLEDGE DOMAINS (3 credits)

Any General Education course can be taken to satisfy these 3 credits.

ADDITIONAL REQUIREMENTS

Every associate degree student will also complete, as part of his or her additional associate degree requirements, 3 credits of United States Cultures (US) or 3 credits of International Cultures (IL) and 3 credits of Writing Across the Curriculum (M, W, Y, and X) requirements.

Flexibility of the Associate Degree General Education Requirements

The General Education program extends the concept of flexibility to all aspects of the degree program. Penn State wants students to use General Education as an opportunity to experiment and explore, to take academic risks, to discover things they did not know before, and to learn to do things they have not done before.

To these ends, students may, with the permission of their adviser and dean's representative:

1. substitute a 200- to 499-level course for an Arts, Humanities, Natural Sciences, or Social and Behavioral Sciences course found on the General Education list. For example, a student may take a 400-level course in history and use it to meet the General Education requirement satisfied by a comparable lower level history course.
2. meet the United States Cultures (US) and International Cultures (IL) requirement through completion of an experiential learning program or practicum (one-semester or year long) approved by their college dean's office. Approved Penn State Education Abroad Programs may be used to satisfy the International Cultures (IL) requirement.
3. Three credits of the required 21 credits of General Education courses are to be selected from any of the following General Education areas: Writing/Speaking, Quantification, Natural Sciences, Arts, Humanities, or Social and Behavioral Sciences.

General Education Course Designations

Courses that appear in this Bulletin with the following designations have been approved for General Education and for additional requirements.

General Education Skills Courses

- GQ--Quantification Courses
- GWS--Writing/Speaking Courses

General Education Knowledge Domains Courses

- GA--Arts Courses
- GH--Humanities Courses
- GHA--Health and Physical Activity Courses
- GN--Natural Sciences Courses
- GS--Social and Behavioral Sciences Courses

ADDITIONAL REQUIREMENTS

United States Cultures and International Cultures Courses

- IL--International Cultures Courses
- US--United States Cultures Courses
- US; IL--United States Cultures and International Cultures Courses
- U--United States Cultures and/or International Cultures and Honors
- Y-- United States Cultures and/or International Cultures and Writing Across the Curriculum

First-Year Seminar

- PSU--First-Year Seminar
- S--First-Year Seminar
- T--First-Year Seminar, Honors
- X--Writing Across the Curriculum in a First-Year Seminar

Writing Across the Curriculum

- M--Writing Across the Curriculum, Honors
- W--Writing Across the Curriculum
- X--Writing Across the Curriculum in a First-Year Seminar
- Y-- United States Cultures and/or International Cultures and Writing Across the Curriculum

Honors Course in Any Category

- H--Honors

THE BACCALAUREATE DEGREE GENERAL EDUCATION PROGRAM

The baccalaureate degree General Education program consists of 45 credits that are distributed among two General Education components: (1) Skills (15 credits) and (2) Knowledge Domains (30 credits) in the Natural Sciences, Arts, Humanities, Social and Behavioral Sciences, and Health and Physical Activity. Every baccalaureate degree student also completes the First-Year Seminar, United States Cultures and International Cultures, and Writing Across the Curriculum requirements.

A restriction is placed on students in majors that are closely linked to the Knowledge Domains of Natural Sciences, Arts, Humanities, and Social and Behavioral Sciences to ensure that they participate in the full breadth of General Education. These students may not use a course in their academic major to satisfy one of the Knowledge Domains requirements. For example, an Economics major may not use an economics course to fulfill his/her social and behavioral sciences requirement. Also, students may not count courses cross-listed with courses in their major to fulfill one of the General Education Knowledge Domain, e.g., a Theatre major may not register for THEA 208 (GA;US;IL) / AAAS 208 (GA;US;IL) and have it count in the Arts requirement.

BACCALAUREATE DEGREE REQUIREMENTS GENERAL EDUCATION

SKILLS	credits
Writing/Speaking (GWS)	9 credits
Quantification (GQ)*	6 credits
	total15 credits

KNOWLEDGE DOMAINS	credits
Health and Physical Activity (GHA)	3 credits
Natural Sciences (GN)	9 credits
Arts (GA)	6 credits
Humanities (GH)	6 credits
Social and Behavioral Sciences (GS)	6 credits
	total30 credits

ADDITIONAL REQUIREMENTS	credits
First-Year Engagement Program (S, T, X, or PSU)**	credits vary
United States Cultures (US)	3 credits***
International Cultures (IL)	3 credits***
Writing Across the Curriculum (W, M, X,Y)	3 credits***

*3-6 credits are selected from mathematics, applied mathematics, and statistics; 3 credits may be selected from computer science or symbolic logic.

**May include a First-Year Seminar (S, T, X, or PSU); a student's campus of enrollment determines whether or not a First-Year Seminar is required. Students at the University Park campus are required to complete at least 1 credit of first-year seminar and meet any other first-year requirements specified by their home college. Students at the Commonwealth campuses are required to complete the first-year experiences specified by their campus. First-year baccalaureate students entering Penn State should consult their enrollment home for these requirements.

***May be completed by designated courses that also meet other degree or General Education requirements.

Flexibility of the Baccalaureate Degree General Education Requirements

Penn State wants students to use General Education to experiment and explore, to take academic risks, to discover things they did not know before, and to learn to do things they have not done before. To that end, the General Education program extends the concept of flexibility to all aspects of the degree program.

Students may, with the permission of their adviser and dean's representative:

1. Substitute a 200- to 499-level course in an area of General Education for a course found on the General Education list. For example, a student may take a 400-level course in history and use it to meet the General Education requirement satisfied by a comparable lower-level history course.
2. Substitute a foreign language at the twelfth credit level of proficiency, as measured by the Penn State foreign language offerings, for 3 credits in any of the categories of General Education. Baccalaureate degree students may substitute study in a foreign/second language at the twelfth credit level of proficiency or higher for any three credits in any of the categories of general education only if those three credits are in language study beyond their degree requirements.*
3. Substitute a third course in one of the Knowledge Domains areas of Arts, Humanities, or Social and Behavioral Sciences for a second course in one of the other areas. For example, a student might take 3 courses in the Arts, two courses in the Humanities, and only one course in the Social and Behavioral Sciences. This substitution is often referred to as the 9-6-3 sequence, representing the 9 credits, 6 credits, and 3 credits completed in place of the specified 6-6-6.*
4. Meet the United States Cultures (US) and International Cultures (IL) requirement through completion of an experiential learning program or practicum (one-semester or year long) approved by their College Dean's Office. Approved Penn State Education Abroad Programs may be used to satisfy the International Cultures (IL) requirement.
5. Meet First-Year Engagement Program requirements through completion of a First-Year Experience offered by any unit of the University. Thus, a student who successfully completes a First-Year Engagement Program in one college or campus, prior to transferring to another college or campus, will not be required to complete another First-Year Experience. However, since there are various modes of offering First-Year Seminars throughout the University, students transferring to a new college may find that a required course that is also a First-Year Seminar must still be taken.

*The use of these two substitutions (No. 2 and No. 3 above), either alone or in combination, may not lead to the complete elimination of any area in the skills or knowledge domains categories in the student's general education program.

THE ASSOCIATE DEGREE GENERAL EDUCATION PROGRAM

The associate degree General Education program consists of 21 credits that are distributed among two General Education components:

1. (1) Skills: 6 credits in courses that develop communicative and quantitative skills; and
2. (2) Knowledge Domains: 12 credits in the Natural Sciences, Arts, Humanities, and Social and Behavioral Sciences, with an additional 3 credits in any General Education area.

Associate degree students have a 3-credit requirement and may choose either a United States Cultures (US) course or an International Cultures (IL) course, and must complete a 3-credit writing intensive course (W).

A restriction is placed on students in majors that are closely linked to the Knowledge Domains areas of Natural Sciences, Arts, Humanities, and Social and Behavioral Sciences, in order to ensure that they participate in the full breadth of General Education. These students may not use a course in their academic major to satisfy one of the Knowledge Domains area requirements. For example, an Economics major may not use an economics course to fulfill his/her social and behavioral sciences requirement.

ASSOCIATE DEGREE REQUIREMENTS GENERAL EDUCATION

SKILLS		credits
Writing/Speaking (GWS)		3 credits
Quantification (GQ)		3 credits
		total 6 credits

KNOWLEDGE DOMAINS		credits
Natural Sciences (GN)		3 credits
Arts (GA)		3 credits
Humanities (GH)		3 credits
Social and Behavioral Sciences (GS)		3 credits
		total 12 credits

SKILL OR KNOWLEDGE DOMAINS	credits
Any General Education course can be taken to satisfy these 3 credits	3 credits

ADDITIONAL REQUIREMENTS	credits
United States Cultures (US) or International Cultures (IL) or combined designation (US;IL)	3 credits*
Writing Across the Curriculum (W, M, X, Y)	3 credits*
	total 6 credits

* May be completed by designated courses that also meet other degree or General Education requirements.

Flexibility of the Associate Degree General Education Requirements

The General Education program extends the concept of flexibility to all aspects of the degree program. Penn State wants students to use General Education as an opportunity to experiment and explore, to take academic risks, to discover things they did not know before, and to learn to do things they have not done before.

To these ends, students may, with the permission of their adviser and dean's representative:

1. Substitute a 200- to 499-level course for an Arts, Humanities, Natural Sciences, or Social and Behavioral Sciences course found on the General Education list. For example, a student may take a 400-level course in history and use it to meet the General Education requirement satisfied by a comparable lower level history course.
2. Meet the United States Cultures (US) and International Cultures (IL) requirement through completion of an experiential learning program or practicum (one-semester or year long) approved by their college dean's Office. Approved Penn State Education Abroad Programs may be used to satisfy the International Cultures (IL) requirement.

3. Three credits of the required 21 credits of General Education courses are to be selected from any of the following General Education areas: Writing/Speaking, Quantification, Natural Sciences, Arts, Humanities, or Social and Behavioral Sciences.

Health and Physical Activity

All course descriptions are updated periodically.

85 courses.

BB H 048 (GHA)

Values and Health Behavior (1.5) Examination of issues that impact the social, emotional, and physical well-being of college students through a values and decision-making process.

Effective: Fall 2003

BB H 101 (GHA)

Introduction to Biobehavioral Health (3) Introduction to an interdisciplinary study of health, examining the interaction of biological processes and behavior on health.

Effective: Spring 2000

BB H 101H (GHA)

Introduction to Biobehavioral Health (3) Introduction to interdisciplinary study of health, examining the interaction of biological processes and behavior on health.

Effective: Summer 1998

BB H 119 (GHA)

Behavior, Health, and Disease (3) Principles of health promotion, disease prevention, and treatment of acute and chronic illness. This course is designed for non-BB H majors.

Effective: Spring 2002

BB H 130 (GHA)

Strategies for Addressing the Obesity and Diabetes Epidemics (3) Strategies for understanding and modifying the factors underlying weight, health, and the current U.S. and worldwide obesity/diabetes epidemics.

Effective: Spring 2011

BB H 143 (GHA)

Drugs, Behavior, and Health (3) Health aspects of use and abuse of licit and illicit drugs; related social problems and prevention. Designed for non-BB H majors.

Effective: Spring 2002

BB H 146 (GHA)

Introduction to Health and Human Sexuality (3) An examination of human sexuality as it relates to health.

Effective: Summer 2002

C E 254 (GHA;US)

Personal & Occupational Safety (3) Students will learn about principles of safety in work and personal settings.

Effective: Spring 2008

CSD 100 (GHA;US)

Preventing Vocal Abuse, Misuse, and Disorders (3) Principles of the voice mechanisms, preventing vocal abuse, and promoting vocal health across the life span.

Effective: Fall 2012

CSD 101 (GHA;US)

Preventing Hearing Loss (1.5) Assessment, intervention, and prevention of hearing loss caused by loud music and recreational and industrial noise.

Effective: Summer 2005

DANCE 170 (GHA)

Conditioning for Dancers (1.5 per semester/maximum of 3) This course is designed to improve technique through strengthening, toning, improving coordination, increasing balance, and helping alignment. The course also addresses common areas of injury.

Effective: Spring 2013

Prerequisite: and dance course

DANCE 270 (GHA)

Introduction to Bartenieff Fundamentals (3) Physical and theoretical approach to movement: facilitates efficiency, and expression through dynamic alignment, mobility, kinesthetic awareness; reduce physical injuries.

Effective: Spring 2003

FD SC 105 (S T S 105) (GHA)

Food Facts and Fads (3) Impact on society and the individual of modern food technology, food laws, additives, etc.; historical, current, and futuristic aspects.

Effective: Spring 2004

H P A 057 (GHA)

Consumer Choices in Health Care (3) Introduction to consumers' role in health-care decisions, including health benefits, physician and hospital choice, and end-of-life choices.

Effective: Spring 2004

KINES 001 (GHA)

Introduction to Outdoor Pursuits (1.5-3 per semester, maximum of 12) Introduction to selected outdoor pursuit

activities, such as, but not limited to, rock climbing, cross country skiing, backpacking, hiking, orienteering.

Effective: Fall 2008

KINES 004 (GHA)

Principles of Fly Tying and Fly Fishing for Trout (1.5) A course designed to enhance student's knowledge, skill, and performance in fly tying and the sport of fly fishing for trout.

Effective: Fall 2001

KINES 006 (GHA)

Cycling (1.5) A course designed to give students an understanding of and the ability to establish an exercise program involving riding.

Effective: Summer 2003

KINES 010 (GHA)

Indoor Rock Climbing (1.5) A course designed to provide students with the basic skills, safety, and knowledge of rock climbing.

Effective: Summer 2003

KINES 010A (GHA)

Lead Rock Climbing (1.5) A course designed to provide students with skills, safety, and knowledge of lead rock climbing in a top rope environment.

Effective: Summer 2003

Prerequisite: KINES 010 or with permission of program

KINES 011 (GHA)

Basic Downhill Skiing (1) Students will gain a comprehensive understanding and basic level of proficiency in Downhill Skiing.

Effective: Summer 2004

KINES 011A (GHA)

Intermediate Downhill Skiing (1) Students will gain a comprehensive understanding and intermediate to advanced level of proficiency in Downhill Skiing.

Effective: Summer 2004

KINES 012 (GHA)

Snowboarding (1) Students will gain a comprehensive understanding and basic level of proficiency in Snowboarding.

Effective: Summer 2004

KINES 013 (GHA)

First Aid, Personal Safety, and CPR (1) A course designed to provide students with the opportunity for Red Cross certification in Community First Aid, Safety, and CPR.

Effective: Fall 2003

KINES 017 (GHA)

Ballroom Dance (1.5) A course designed to provide students with basic dance skills and an understanding and appreciation of ballroom dance.

Effective: Summer 2003

KINES 017S (GHA)

Ballroom Dance (1.5) A course designed to provide students with basic dance skills and an understanding and appreciation of ballroom dance.

Effective: Fall 2007

KINES 020 (GHA)

Modern Dance (1.5) A course designed to teach the basic skills of modern dance and to develop a further appreciation of modern dance.

Effective: Summer 2002

KINES 024 (GHA)

Introduction to Lifetime Sports (1.5) Students participate in lifetime sports such as archery, bowling, golf, and at least one racquet and/or winter sport.

Effective: Summer 2002

KINES 025 (GHA)

Introduction to Court Sports (1.5) A course designed to introduce students to various court sports such as tennis, racquetball, handball, squash, and/or badminton.

Effective: Summer 1999

KINES 026 (GHA)

Archery/Indoor & Outdoor (1.5) Course designed to introduce students to Archery/Bowhunting.

Effective: Summer 2003

KINES 027 (GHA)

Badminton 1 (1.5) The course promotes health, fitness, and enjoyment of the game of badminton.

Effective: Summer 2002

KINES 028 (GHA)

Fencing I (1.5) Kinesiology 028 is designed to give students knowledge of the rules, strategies and skills of the sport of Fencing.

Effective: Summer 2004

KINES 029 (GHA)

Golf I (1-1.5) A course designed to give students an understanding of and a proficiency in golf skills, rules, and etiquette.
Effective: Summer 1999

KINES 029A (GHA)

Golf II (1.5) A course designed to provide a further understanding of and a more advanced proficiency in golf skills, rules and etiquette.

Effective: Summer 2004

Prerequisite: KINES 029 or equivalent

KINES 041 (GHA)

Handball (1.5) A course designed to introduce students to a basic instructional course in the fundamentals of 4-wall handball.

Effective: Spring 2001

KINES 042 (GHA)

Ice Skating--Beginning (1.5) A course of instruction focused on the physical development and knowledge of basic ice skating skills.

Effective: Summer 2002

KINES 042A (GHA)

Ice Skating--Advanced Beginning (1.5) A course of instruction focused on the physical development and knowledge of basic ice skating skills.

Effective: Summer 2002

Prerequisite: KINES 042 or some experience with the activity

KINES 042B (GHA)

Ice Skating--Intermediate/Advanced (1.5) A course of instruction in basic figure skating: field moves, freestyle, choreography, pairs skating, and ice dance.

Effective: Summer 2002

Prerequisite: KINES 042 and/or KINES 042A or equivalent skating experience

KINES 043 (GHA)

Power Skating (1.5) A course of instruction in basic power skating specifically designed for ice hockey, applicable to other ice sports.

Effective: Summer 2002

Prerequisite: KINES 042 or KINES 042A or equivalent skating experience

KINES 044 (GHA)

Racquetball I (1-1.5) The course promotes health, fitness, and enjoyment of the game of racquetball.

Effective: Spring 2001

KINES 045 (GHA)

NAUI Basic Scuba (1.5) A course to introduce students to the fundamentals of Scuba diving.

Effective: Summer 2002

Prerequisite: meet NAUI standards and/or by permission of the instructor

KINES 046 (GHA)

Squash I (1-1.5) A course designed to give students an appreciation of and proficiency in the skills, rules, and regulations of squash.

Effective: Spring 2001

KINES 047 (GHA)

Beginning Swimming (1.5) A course designed to give students skills and knowledge necessary to be safe in shallow and deep water.

Effective: Summer 2002

KINES 047A (GHA)

Advanced Beginner Swimming (1.5) A course designed to give students skills and knowledge necessary to be safe in shallow and deep water.

Effective: Summer 2002

Prerequisite: students should be comfortable in shallow and deep water and be moderately proficient in front crawl elementary backstroke sidestroke and breaststroke

KINES 047B (GHA)

Intermediate Swimming (1.5) A course designed to teach students a variety of swimming strokes and increase their knowledge of fitness using aquatic activities.

Effective: Summer 2002

Prerequisite: KINES 047A or equivalent skills; students should be safe in deep water and have proficiency in the front crawl elementary backstroke sidestroke and breaststroke

KINES 048 (GHA)

Tennis I (1.5) A course designed to give students an appreciation of and proficiency in the skills, rules, and regulations of tennis.

Effective: Spring 2001

KINES 048A (GHA)

Tennis II (1.5) A course designed to give students an appreciation of and proficiency in the skills, rules, and regulations of tennis.

Effective: Summer 2004

Prerequisite: KINES 048 or for students who demonstrate reasonable consistency in depth and placement of ground strokes and the serve and who have not had instruction at Penn State.

KINES 054 (GHA)

Aikido (1.5) Students will gain a comprehensive understanding and basic level of proficiency in the Japanese Traditional martial art of Aikido.

Effective: Summer 2003

KINES 056 (GHA)

Introduction to Martial Arts (1.5) A course designed to give students an introduction to martial arts, and the use of martial arts for lifelong fitness.

Effective: Summer 2002

KINES 057 (GHA)

Personal Defense (1.5) A course designed to give students an understanding of and a proficiency in martial arts and self-defense.

Effective: Summer 2004

KINES 058 (GHA)

Judo I (1.5) Kinesiology 058 will help students develop stamina, confidence and discipline, and promote general fitness through the introduction to basic Judo.

Effective: Summer 2003

KINES 059 (GHA)

Introduction to Karate (1.5) A course designed to give students an understanding of and a proficiency in Karate.

Effective: Summer 2003

KINES 061 (GHA)

Fitness Theory and Practice (3) Students will learn about the science of fitness/wellness; evaluate their present fitness levels and create a personal fitness plan.

Effective: Spring 2001

KINES 061S (GHA)

Fitness Theory and Practice (3) Students will learn about the science of fitness/wellness; evaluate their present fitness levels and create a personal fitness plan.

Effective: Summer 2005

KINES 062 (GHA)

Introduction to Cardiovascular Activities (1.5) A course designed to give students an introduction to various types of cardiovascular training.

Effective: Summer 2002

KINES 063 (GHA)

Aerobic Dance (1.5) A course designed to involve students in daily aerobic activity while teaching the fundamentals of overall health and well-being.

Effective: Summer 2002

KINES 065 (GHA)

Jogging (1.5) A course designed to give students an understanding of and the ability to establish an exercise program involving jogging.

Effective: Summer 2003

KINES 067 (GHA)

Physical Conditioning (1.5) A course designed to give students an experience with an understanding of vigorous physical training.

Effective: Spring 2001

KINES 068 (GHA)

Strength Training (1.5) Designed to improve students' muscular strength/endurance, teaches students how to develop an effective personal strength/endurance training program for lifelong fitness.

Effective: Summer 2002

KINES 070 (GHA)

Swim Conditioning (1.5) A course designed to provide students an understanding of and proficiency in swimming conditioning.

Effective: Summer 2002

Prerequisite: KINES 047A

KINES 072 (GHA)

Fitness Walking (1-1.5) A course designed to give students an understanding of and a proficiency in fitness walking.

Effective: Spring 2001

KINES 076 (GHA)

Introduction to Tai Chi Ch'uan (1.5) A course designed to introduce students to Tai Chi Ch'uan, a traditional Chinese system of personal cultivation and self-defense.

Effective: Summer 2004

KINES 077 (GHA)

Yoga 1 (1.5) A course designed to give students an understanding of and proficiency in yoga.

Effective: Summer 2002

KINES 077A (GHA)

Advanced Yoga (1.5) A course designed to expand on a student's fundamental understanding of and proficiency in yoga.
Effective: Summer 2003
Prerequisite: KINES 077

KINES 081 (GHA)

Wellness Theory (3) Focused on preparing and engaging students in the attitudes and behaviors that enhance quality of life and maximize personal potential.
Effective: Summer 2002

KINES 082 (GHA)

Action Methods for Stress Management (3) Achieving wellness by studying the effects of stressors on systems of the body and effectiveness of activity to relieve stress.
Effective: Summer 2002

KINES 083 (GHA)

Exercise for Stress Management (1.5) A course designed to identify the factors that contribute to student stress and develop strategies that will manage these factors. Students who receive credit for KINES 083 will not receive credit for KINES 082.
Effective: Summer 2002

KINES 084 (GHA)

Fitness for Life (1.5-2) A course designed to give students an understanding of the fundamental principles of physical fitness. Students who receive credit for KINES 084 shall not receive credit for either KINES 061 or 081.
Effective: Summer 1999

KINES 088 (GHA)

Varsity Sport Experience (2) A course designed to promote an active and healthful lifestyle through participation in a varsity sport sanctioned by Penn State.
Effective: Summer 2004

KINES 089 (GHA)

Student Wilderness Experience (3) Incoming student wilderness experience. Backpacking and one additional adventure: rock climbing, high ropes course/canoeing. One-day of community service.
Effective: Summer 2003

KINES 090 (GHA)

Introduction to Team Sports/Indoor (1-1.5) A course designed to introduce students to indoor team sports.
Effective: Spring 2001

KINES 090A (GHA)

Introduction to Team Sports/Indoor - Volleyball (1.5 per semester/maximum of 99) A course designed to introduce students to the team sport of volleyball.
Effective: Spring 2004

KINES 090B (GHA)

Introduction to Team Sports/Indoor - Basketball (1.5 per semester/maximum of 99) A course designed to introduce students to the team sport of basketball.
Effective: Spring 2004

KINES 090C (GHA)

Introduction to Team Sports/Indoor - Team Handball (1.5 per semester/maximum of 99) A course designed to introduce students to the sport of team handball.
Effective: Spring 2004

KINES 091A (GHA)

Introduction to Team Sports/Outdoor - Soccer (1.5 per semester) A course designed to introduce students to the outdoor team sport of Soccer.
Effective: Summer 2004

KINES 091C (GHA)

Introduction to Team Sports/Outdoor - Rugby (1.5 per semester) A course designed to introduce students to the outdoor team sport of Rugby.
Effective: Summer 2004

KINES 091D (GHA)

Introduction to Team Sports/Outdoor-Ultimate Frisbee (1.5 per semester) A course designed to introduce students to the outdoor team sport of Ultimate Frisbee.
Effective: Summer 2004

KINES 093 (GHA)

Masters Activity (Sport) (1.5 per semester/maximum of 12) A course that introduces students to movement subcultures by providing the knowledge, habits, and skills for activity across the lifespan.
Effective: Spring 2003
Prerequisite: successful completion of relevant activity course or permission of the instructor

KINES 096 (GHA)

Independent Study in Physical Activity (.5-3 per semester) This course is designed to meet the needs of students to expand Kinesiology experiences beyond the designed course curriculum.
Effective: Spring 2006

KINES 303 (GHA)

Emergency Care - First Aid/Safety/AED (3) Develop skills for First Responder Certification in CPR/AED, First Aid and Safety by American Red Cross or National Safety Council.

Effective: Fall 2003

NURS 203 (GHA)

First Aid and CPR (3) An introductory first aid course designed to provide the basic knowledge and skills to provide assistance to someone injured/ill.

Effective: Fall 2008 Ending: Fall 2016

NURS 203 (GHA)

First Aid and CPR (3) An introductory first aid course designed to provide the basic knowledge and skills to provide assistance to someone injured/ill.

Effective: Spring 2017 Future: Spring 2017

NUTR 100 (GHA)

Contemporary Nutrition Concerns (1.5) Interpretation of nutrition principles in relation to contemporary problems in selecting a diet to promote a healthy lifestyle. Students who have received credit for NUTR 151 or NUTR 251 may not schedule this course.

Effective: Spring 2004

NUTR 251 (GHA)

Introductory Principles of Nutrition (3) The nutrients: food sources and physiological functions as related to human growth and well-being throughout life; current nutrition issues. Students who have passed NUTR 151 may not schedule this course.

Effective: Spring 2004

S T S 105 (FD SC 105) (GHA)

Food Facts and Fads (3) Impact on society and the individual of modern food technology, food laws, additives, etc.; historical, current, and futuristic aspects.

Effective: Spring 2004

VB SC 130 (GHA)

Understanding Human Disease (3) An explanation of disease mechanisms, enabling non-scientists to better understand medical journalism and apply basic medical principles to everyday life.

Effective: Summer 2014

Natural Sciences

All course descriptions are updated periodically.

169 courses.

AERSP 055 (S T S 055) (GN)

Space Science and Technology (3) The science and technology of space exploration and exploitation; physical principles; research and development; history, space policy, and social implications.

Effective: Spring 1994

AFR 105 (EARTH 105) (GN;IL)

Environments of Africa: Geology and Climate Change (3) Significant natural features of Africa as related to human endeavor; case studies include the Nile, climate change, natural resources.

Effective: Spring 2013

AGECO 121 (GN)

Plant Stress: It's Not Easy Being Green (3) The many hazards faced by plants and the dynamic ways that plants respond to these problems are examined.

Effective: Summer 2013

AGECO 122 (METEO 122) (GN)

Atmospheric Environment: Growing in the Wind (3) Dynamic effects of weather on ecosystems and habitation of Earth.

Effective: Summer 2013

AGECO 134 (R SOC 134) (GN)

Sustainable Agriculture Science and Policy (3) The science, socio-economics, and politics of managing food and fiber production systems. Sustainability implications of current practices and future options.

Effective: Summer 2013

AGECO 144 (GN)

Principles and Practices of Organic Agriculture (3) An introduction to the science, principles and practices of organic agricultural systems for food production.

Effective: Summer 2013

AN SC 100 (GN)

Introduction to Animal Industries (3) Students will study the biology, production systems, terminology, and emerging issues of the N. American animal industries.

Effective: Summer 2013

AN SC 300 (GN)

Integrated Animal Biology (3) An integrated study of the biology of domestic animal growth and the underlying cellular, endocrine and immune systems involved.

Effective: Summer 2013

Prerequisite: BIOL 011 and BIOL 012 or BIOL 110 ; at least third-semester standing

ANTH 021 (GN)

Introductory Biological Anthropology (3) The role of human biology and evolution in culture, society, and behavior.

Effective: Spring 2001

ANTH 022 (GN)

Humans as Primates (3) The biological basis of human behavior within the context of primate biology, behavior, and evolution.

Effective: Spring 2009

ANTH 215 (GN)

Skin: Evolution, Biology and Culture (3) This course will explore the evolution and roles of skin and human life, including health, communication, and social wellbeing.

Effective: Summer 2015

Prerequisite: ANTH 021 or ANTH 045

ANTH 216 (GN;GS)

Sex and Evolution (3) Introduction to evolutionary theory and its application to understanding human sexuality and sex differences.

Effective: Summer 2009

ANTH 218 (GN)

Genes, Evolution and Behavior (4) This course explores how genes influence our traits and how our traits evolve, with special emphasis on behavior.

Effective: Summer 2013

ANTH 260H (GN)

Building the Human Animal (3) An exploration of how the same genetic and developmental properities that shape animal evolution produced the unique human form.

Effective: Summer 2014

ANTH 271H (GN)

Parasites and Human Evolution (3) Advance our understanding of human evolution by studying the ecologies and

evolutionary histories of our parasites.

Effective: Spring 2014

Prerequisite: one introductory course that covers some aspects of evolutionary biology or parasitology for example: ANTH 021 BIOL 110 ENT 202 MICRB 106 or MICRB 201.

ASTRO 001 (GN)

Astronomical Universe (3) The development of modern understanding of the astronomical universe from planets and stars to galaxies and cosmology. Student who have passed ASTRO 005, ASTRO 006, or ASTRO 010 may not take this course for credit.

Effective: Fall 2009

ASTRO 001H (GN)

Astronomical Universe (3) The development of modern understanding of the astronomical universe from planets and stars to galaxies and cosmology. Students who have passed ASTRO 005, ASTRO 006, or ASTRO 010 may not take this course for credit.

Effective: Fall 2009

ASTRO 005 (GN)

The Sky and Planets (3) The development of our modern understanding of the visible sky and planetary systems.

Students who have passed ASTRO 001 or ASTRO 010 may not take this course for credit.

Effective: Summer 2008

Prerequisite: Students who have passed ASTRO 001 or ASTRO 010 may not take this course.

ASTRO 006 (GN)

Stars, Galaxies, and the Universe (3) The development of our modern understanding of stars, galaxies, and the astronomical universe. Students who have passed ASTRO 001 or ASTRO 010 may not take this course for credit.

Effective: Summer 2008

Prerequisite: Students who have passed ASTRO 001 and ASTRO 010 may not take this course.

ASTRO 010 (GN)

Elementary Astronomy (2) Introductory survey of modern astronomy from planets and stars to galaxies and the universe. Students who have passed ASTRO 001, ASTRO 005, or ASTRO 006 may not take this course for credit. Students may not receive General Education credit for ASTRO 010 unless they also take ASTRO 011.

Effective: Fall 2009

ASTRO 011 (GN)

Elementary Astronomy Laboratory (1) Selected experiments and explorations to illustrate major astronomical principles and techniques. Telescopes observations of planets, stars and nebulae.

Effective: Fall 2004

Prerequisite: or concurrent: ASTRO 001 or ASTRO 010

ASTRO 120 (GN)

The Big Bang Universe (3) Exploration of cosmology, birth, and ultimate fate of the universe; origin of galaxies, quasars, and dark matter. For non-science majors.

Effective: Fall 2012

Prerequisite: ASTRO 001 ASTRO 006 or ASTRO 010

ASTRO 130 (GN)

Black Holes in the Universe (3) The predicted properties of black holes and the astronomical evidence for their existence are investigated in the context of modern ideas about space, time, and gravity.

Effective: Spring 2011

Prerequisite: ASTRO 001 ASTRO 006 or ASTRO 010

ASTRO 140 (GN)

Life in the Universe (3) The problem of the existence of life beyond Earth is investigated, drawing from recent research in astronomy and other fields. For non-science majors.

Effective: Fall 2012

Prerequisite: ASTRO 001 ASTRO 005 or ASTRO 010

ASTRO 291 (GN)

Astronomical Methods and the Solar System (3) Physical processes and observational techniques in astronomical systems, characteristics of the sun, planets, and moons.

Effective: Spring 2002

Prerequisite: PHYS 211

ASTRO 292 (GN)

Astronomy of the Distant Universe (3) Observed properties and astrophysical understanding of stars, stellar evolution, galaxies, the large-scale universe, and cosmology.

Effective: Spring 2002

Prerequisite: ASTRO 291

ASTRO 320 (GN)

Observational Astronomy Laboratory (2) Basic observational astronomy techniques introduced through observational exercises, lab experiments, and lectures on relevant statistical techniques.

Effective: Fall 2012

Prerequisite: ASTRO 291

B M B 001 (GN)

Understanding the Bases of Human Disease (3) A broad survey of the molecular and cellular factors that contribute to an understanding of selected human diseases.

Effective: Fall 2004

BI SC 001 (GN)

Structure and Function of Organisms (3) An exploration of how cellular structures and processes contribute to life and how life displays unity even in its diversity. Students who have passed BIOL 027, 110, or 141 may not schedule this course.

Effective: Fall 2004

BI SC 002 (GN)

Genetics, Ecology, and Evolution (3) The study of how living organisms inherit their traits, how plants and animals evolved, and how they now interact. Students who have passed BIOL 033, 133, 110, 220W, or 222 may not schedule this course.

Effective: Spring 2003

BI SC 003 (GN)

Environmental Science (3) Kinds of environments; past and present uses and abuses of natural resources; disposal of human wastes; prospects for the future. Students who have passed BIOL 220 or any other upper-level ecology course in biology may not schedule this course.

Effective: Fall 2003

BI SC 004 (GN)

Human Body: Form and Function (3) A general survey of structure and function--from conception, through growth and reproduction, to death. Students who have passed BIOL 129 and 141 may not schedule this course.

Effective: Spring 2002

BIOL 011 (GN)

Introductory Biology I (3) An introduction to fundamental biological topics (including cells, energy transduction, genetics, evolution, organismal structure/function, ecology) for non-majors biology-related fields.

Effective: Fall 2003

BIOL 012 (GN)

Introductory Biology II (1) Laboratory exercises demonstrating principles of biology.

Effective: Summer 1992

Prerequisite: or concurrent: BIOL 011

BIOL 110 (GN)

Biology: Basic Concepts and Biodiversity (4) A study of the evolution of the major groups of organisms including the fundamental concepts of biology.

Effective: Fall 2003

BIOL 110H (GN)

Honors Biology: Basic Concepts and Biodiversity (4) Honors study of the evolution of the major groups of organisms including the fundamental concepts of biology.

Effective: Spring 2006

BIOL 110L (GN)

Biology: Basic Concepts and Biodiversity (4) A study of the evolution of the major groups of organisms including the fundamental concepts of biology.

Effective: Summer 1994

BIOL 110P (GN)

Biology: Basic Concepts and Biodiversity A study of the evolution of the major groups of organisms including the fundamental concepts of biology.

Effective: Summer 1994

BIOL 110S (GN)

Biology: Basic Concepts and Biodiversity (4) A study of the evolution of the major groups of organisms including the fundamental concepts of biology. This course also fulfills the First-Year Seminar requirements.

Effective: Summer 1999

BIOL 120A (GN;US;IL)

Plants, Places, and People (3) Useful and dangerous plants; historical (archaeological), cultural (ethnological), and economic (anthropocentric) aspects, including structural and chemical characteristics of botanical importance. Students who have passed BIOL (PPATH;S T S) 424 may not schedule this course.

Effective: Spring 2008

BIOL 127 (GN)

Introduction to Plant Biology (3) Cellular structure and organization; physiological processes; classification; reproduction and development; relationship of plant groups. Students who have passed BIOL 240W may not schedule this course.

Effective: Spring 2008

BIOL 129 (GN)

Mammalian Anatomy (4) Anatomy of a mammal, with special reference to that of man. Students who have passed BIOL 421 may not schedule this course.

Effective: Fall 2003

BIOL 129L (GN)

Mammalian Anatomy (4) Anatomy of a mammal, with special reference to that of man. Students who have passed BIOL 421 may not schedule this course.

Effective: Fall 2003

BIOL 129P (GN)

Mammalian Anatomy Anatomy of a mammal, with special reference to that of man. Students who have passed BIOL 421 may not schedule this course.
Effective: Fall 1998

BIOL 133 (GN)

Genetics and Evolution of the Human Species (3) Human heredity and evolution, individual and social implications. The course is for non-majors; students who have passed BIOL 222, 230W, B M B 251 or any upper-division biology course may not schedule this course.
Effective: Spring 2008

BIOL 141 (GN)

Introductory Physiology (3) Explanation of the normal structure and function of the animal body, with special emphasis on human body systems. Students who have passed BIOL 472 may not schedule this course.
Effective: Fall 2003

BIOL 155 (GN)

Introduction to the Biology of Aging (3) Examination of human aging from a biological perspective. Population demographics, physiological and pathological changes, and healthy lifestyles are discussed. Students who have passed BIOL 409 may not schedule this course.
Effective: Spring 2008

BIOL 177 (GN)

Biology of Sex (3) Basic structure and function of the human reproductive system. Physiology of gametogenesis, fertilization, contraception, gestation, parturition, lactation, and sexual behavior.
Effective: Spring 2008

BIOL 220M (GN)

Honors Biology: Populations and Communities (4) Honors study of the major physical, chemical, and biological factors constituting environment and their dynamic interaction with organisms forming ecosystems.
Effective: Summer 2005
Prerequisite: BIOL 110

BIOL 220W (GN)

Biology: Populations and Communities (4) A study of the structures and functions of organismic interactions from simple populations to complex ecosystems. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.
Effective: Fall 2004
Prerequisite: BIOL 110

BIOL 230M (GN)

Honors Biology: Molecules and Cells (4) Honors study of cellular phenomena including molecular genetics and metabolic interactions.
Effective: Summer 2007
Prerequisite: BIOL 110 CHEM 110

BIOL 230W (GN)

Biology: Molecules and Cells (4) A study of cellular phenomena including molecular genetics and metabolic interactions. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.
Effective: Summer 2007
Prerequisite: BIOL 110 CHEM 110

BIOL 240M (GN)

Honors Biology: Function and Development of Organisms (4) Honors study of development and physiological processes at the organismic level. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.)
Effective: Summer 2007
Prerequisite: BIOL 110 CHEM 110

BIOL 240W (GN)

Biology: Function and Development of Organisms (4) A study of development and physiological processes at the organismic level. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.
Effective: Summer 2007
Prerequisite: BIOL 110 CHEM 110

CHEM 001 (GN)

Molecular Science (3) Selected concepts and topics designed to give non-science majors an appreciation for how chemistry impacts everyday life. Students who have received credit for CHEM 003, 101, or 110 may not schedule this course.
Effective: Summer 2007

CHEM 003 (GN)

Molecular Science With Laboratory (3) Selected concepts and topics designed to give non-science majors an appreciation for how chemistry impacts everyday life. Students who have received credit for CHEM 001, 101, or 110 may not schedule this course.

Effective: Summer 2007

CHEM 005 (GN)

Kitchen Chemistry (3) An elementary discussion of the chemistry associated with foods and cooking.

Effective: Summer 2014

CHEM 101 (GN)

Introductory Chemistry (2-3) Selected principles and applications of chemistry. Prior study of chemistry is not assumed. Students may take only one course for General Education credit from CHEM 101 or CHEM 110. Students may take only one course for General Education credit from CHEM 101 GN or CHEM 110 GN.

Effective: Summer 2013

Prerequisite: MATH 021 ; or satisfactory performance on the MATH placement examination-- i.e. placement beyond the level of MATH 021

CHEM 106 (GN)

Introductory and General Chemistry (5) Introductory chemistry and chemical principles for students who are required to take additional chemistry, e.g., CHEM 112, but are unprepared for CHEM 110. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2013

Prerequisite: satisfactory performance on the Math placement test--i.e. placement beyond the level of MATH 022; or MATH 022 or MATH 041

CHEM 110 (GN)

Chemical Principles I (3) Basic concepts and quantitative relations. Students may take only one course for General Education credit from CHEM 110 or CHEM 101. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B). Students may take only one course for General Education credit from CHEM 101 GN or CHEM 110 GN.

Effective: Summer 2013

Prerequisite: satisfactory performance on the Math placement tests -- i.e. placement beyond the level of MATH 022 ; or CHEM 101 and MATH 022 or MATH 041

CHEM 110H (GN)

Chemical Principles I - Honors (3) Basic concepts and quantitative relations of chemistry at a level appropriate for students with advanced backgrounds and talents. Students may take only one course for General Education credit from CHEM 110 or CHEM 101. GN to receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B). GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2013

Prerequisite: satisfactory performance on the Math placement test -- i.e. placement beyond the level of MATH 022 ; or CHEM 101 and MATH 022 or MATH 041

CHEM 111 (GN)

Experimental Chemistry I (1) Introduction to quantitative experimentation in chemistry. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2007

Prerequisite: or concurrent: CHEM 110 or CHEM 106

CHEM 112 (GN)

Chemical Principles II (3) Continuation of CHEM 110, including an introduction to the chemistry of the elements. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Spring 2009

Prerequisite: CHEM 110 or CHEM 106

CHEM 112H (GN)

Chemical Principles II - Honors (3) Continuation of CHEM 110, including an introduction to the chemistry of the elements. GN to receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and (CHEM 111; CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B). GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2013

Prerequisite: CHEM 110 or CHEM 106

CHEM 113 (GN)

Experimental Chemistry II (1) Continuation of CHEM 111, with emphasis on topics related to CHEM 112. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2007

Prerequisite: CHEM 111 . Prerequisite or concurrent: CHEM 112

CHEM 113B (GN)

Experimental Chemistry II--Bioscience (1) A continuation of CHEM 111 with emphasis on topics related to CHEM 112 in the context of bioscience. GN To receive Natural Sciences General Education (GN) credit for certain chemistry courses requires both lecture and laboratory courses be taken. These courses are: (CHEM 106 or CHEM 110 or CHEM 110H) and CHEM 111; (CHEM 112 or CHEM 112H) and (CHEM 113 or CHEM 113B).

Effective: Summer 2007

Prerequisite: CHEM 111 . Prerequisite or Concurrent: CHEM 112

CHEM 233 (ENGL 233) (GH;GN)

Chemistry and Literature (3) Exploration of key concepts of chemistry, the reciprocal influence of chemistry and literature throughout history, and the relationship of science to society, culture, and values.

Effective: Summer 2007

DANCE 370 (GN)

Anatomy for Performers (3) To provide performers with anatomical theory and concepts applicable to the disciplines of the performing arts.

Effective: Summer 2012

Prerequisite: DANCE 270 or THEA 102

E R M 210 (GN)

Environmental Factors and Their Effect on Your Food Supply (3) An exploration of how urban environmental problems influence our ability to obtain food and natural resources.

Effective: Spring 2000

EARTH 002 (GN)

The Earth System and Global Change (3) An interdisciplinary introduction to the processes, interactions and evolution of the earth's biosphere, geosphere and hydrosphere.

Effective: Fall 2007

EARTH 100 (GN)

Environment Earth (3) Natural processes and their relationship to anthropogenic influences. General principles of global cycles and the role they play in natural hazards, global warming, ozone depletion, etc.

Effective: Fall 2004

EARTH 100H (GN)

Environment Earth: Environment and Energy (3) Examination of climate change and energy issues.

Effective: Summer 2014

EARTH 101 (GN;US)

Natural Disasters: Hollywood vs. Reality (3) Analysis of the causes and consequences of natural disasters; comparison of popular media portrayal of disasters with perspective from scientific research.

Effective: Summer 2005

EARTH 103 (GN)

Earth in the Future: Predicting Climate Change and Its Impacts Over the Next Century (3) Climate predictions for the coming century are utilized to examine potential impacts on regions, sectors of society, and natural ecosystems.

Effective: Summer 2000

EARTH 104 (GN)

Climate, Energy and Our Future (3) This course presents the past, present, and possible future response of Earth's climate to human energy use.

Effective: Summer 2015

EARTH 105 (AFR 105) (GN;IL)

Environments of Africa: Geology and Climate Change (3) Significant natural features of Africa as related to human endeavor; case studies include the Nile, climate change, and natural resources.

Effective: Spring 2013

EARTH 106 (GN)

The African Continent: Earthquakes, Tectonics and Geology (3) Study of earthquakes and seismic waves to learn about the geology and plate tectonics of the African continent.

Effective: Summer 2007

EARTH 107 (GN)

Coastal Processes, Hazards and Society (3) Processes responsible for formation, diversity, and evolution of coastal landscapes; socioeconomic and policy responses to changes in coastal regions.

Effective: Spring 2015

EARTH 111 (GN;US)

Water: Science and Society (3) Investigation of water behavior and occurrence, its relevance to life, human activities, politics, and society.

Effective: Summer 2006

EARTH 150 (GN)

Dinosaur Extinctions and Other Controversies (3) Dinosaur extinctions and other major and controversial events in the history of life.

Effective: Spring 2004

EARTH 240 (GN)

Coral Reef Systems (4) The geography, geology, biology ecology and chemistry of coral reef ecosystems; threats to reef environments; and techniques for reef surveying and monitoring; with local geologic and distant modern field studies.

Effective: Spring 2012

Prerequisite: Prerequisite or concurrent: KINES 045 or Nationally Recognized Scuba Certification

EGEE 101 (MATSE 101) (GN)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Fall 2007

EGEE 101A (MATSE 101A) (GN;IL)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Fall 2007

EGEE 101H (GN)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Summer 2009

EGEE 102 (GN)

Energy Conservation for Environmental Protection (3) Exposure to energy efficiency in day-to-day life to save money and energy, and thereby protect the environment.

Effective: Spring 2000

EGEE 102H (GN)

Energy Conservation for Environmental Protection (3) Exposure to energy efficiency in day-to-day life to save money and energy, and thereby protect the environment.

Effective: Summer 2009

EGEE 110 (GN)

Safety Science for the Rest of Your Life (3) Survey of applications and technologies associated with safety in our every day life with associated review of scientific principles and economic, social and political impacts.

Effective: Summer 2005

EGEE 210 (GN)

Technological Legacy of Pennsylvania Coal (3) Survey of coal technologies with a review of scientific principles and economic, social, and political impacts.

Effective: Summer 2005

EM SC 121 (GN)

Minerals and Modern Society (3) Production and use of mineral resources in modern society with an emphasis on the interrelationships and their effect on the Earth system.

Effective: Summer 1996

EM SC 150 (S T S 150) (GN;IL)

Out of the Fiery Furnace (3) A history of materials, energy and man, with emphasis on their interrelationships. For nontechnical students.

Effective: Spring 2006

ENGL 233 (CHEM 233) (GH;GN)

Chemistry and Literature (3) Exploration of key concepts of chemistry, the reciprocal influence of chemistry and literature through history, and the relationship of science to society, culture, and values.

Effective: Spring 2006

ENT 202 (GN)

The Insect Connection (3) An introduction to the diversity of insects and the ways in which they interact with humans and impact our world.

Effective: Summer 1998

ENT 222 (GN)

Honey Bees and Humans (3) This course explores the unique biology and behavior of bees, examining our relationship with them through time and across cultures.

Effective: Spring 2014

FOR 201 (GN)

Global Change and Ecosystems (3) This course will provide students with an understanding of the climate system, ecosystems, and feedbacks between the two.

Effective: Summer 2013

Prerequisite: 3 credits of science

FRNSC 100 (GN)

Introduction to Forensic Science (3) Introduction forensic science.

Effective: Spring 2011

FRNSC 200 (GN)

Introduction to Crime Scene Investigation (3) This course offers an exploration of the science, management, and investigative techniques for the field of crime scene investigation.

Effective: Spring 2010

GEOG 010 (GN)

Physical Geography: An Introduction (3) Survey and synthesis of processes creating geographical patterns of natural resources, with application of basic environmental processes in resource management.

Effective: Spring 2006

GEOG 110 (GN)

Climates of the World (3) Introduction to climatology, including principal processes of the global climatic system and their variation over space and time.

Effective: Fall 2004

GEOG 115 (GN)

Landforms of the World (3) Distribution of the world's landform features and mineral resources; their characteristics, causes, and significance. Practicum includes correlated field trips and laboratory studies.

Effective: Fall 2004

GEOG 314 (GN)

Biogeography and Global Ecology (3) Dynamics of plant and animal distributions on global, regional, and local scales; their causes and consequences.

Effective: Spring 2015

Prerequisite: GEOG 010 or BIOL 110 or equivalent

GEOSC 002 (GN)

Historical Geology (3) History of the earth and its life; fundamentals of evolution, correlation, and paleogeography; practicum includes field trips, study of geologic maps, geologic problems, and fossils, with emphasis on Appalachian geology. (This course includes from one to several field trips for which an additional charge will be made to cover transportation.) This course contains from one to several field trips for which an additional charge will be made to cover transportation.

Effective: Summer 1995

GEOSC 010 (GN)

Geology of the National Parks (3) Introduction to geology, geological change, and environmental hazards, as seen in the National Parks.

Effective: Fall 2003

GEOSC 020 (GN)

Planet Earth (3) Nontechnical presentation of earth processes, materials, and landscape. Practicum includes field trips, study of maps, rocks, and dynamic models, introduction to geologic experimentation. (This course includes from one to several field trips for which an additional charge will be made to cover transportation.) This course contains from one to several field trips for which an additional charge will be made to cover transportation.

Effective: Fall 2003

GEOSC 020L (GN)

Planet Earth (3) Nontechnical presentation of earth processes, materials, and landscape. Practicum includes field trips, study of maps, rocks, and dynamic models, introduction to geologic experimentation. (This course includes from one to several field trips for which an additional charge will be made to cover transportation.)

Effective: Summer 1988

GEOSC 021 (GN)

Earth and Life: Origin and Evolution (3) Introduction to the origin and evolution of life on Earth from the perspective of geologic time and the fossil record. This course contains from one to several field trips for which an additional charge will be made to cover transportation.

Effective: Spring 2002

GEOSC 030 (GN)

Volcanoes (3) Basic concepts in Volcanology and Geosciences are explored through a series of virtual field trips to historic eruptions.

Effective: Summer 2014

GEOSC 040 (GN)

The Sea Around Us (3) Introduction to marine sciences and the world ocean, including physical, chemical, biological, and geological aspects of oceanography.

Effective: Fall 2003

GEOSC 040L (GN)

The Sea Around Us (2) Introduction to marine sciences and the world ocean, including physical, chemical, biological, and geological aspects of oceanography.

Effective: Summer 2009

GEOSC 040P (GN)

The Sea Around Us (1) Introduction to marine sciences and the world ocean, including physical, chemical, biological, and geological aspects of oceanography.

Effective: Spring 2009

GEOSC 109H (GN)

Earthquakes and Society (3) Introduction to earthquakes and seismology, and their relationship to society, including monitoring for nuclear weapons and seismic hazards.

Effective: Spring 2007

GEOSC 110H (GN)

The Science of Gemstones (3) An exploration of the geological uses of gems and of the physical and chemical properties underlying their brilliance and color.

Effective: Summer 2002

Prerequisite: high school chemistry and trigonometry

GEOSC 111 (GN)

Forensic Geoscience (3) Covers fundamental geoscience concepts such as stratigraphy, mineral and soil identification, seismology, and geochemistry within the context of forensic investigation.

Effective: Spring 2008

HORT 101 (GN)

Horticultural Science (3) Introduction to horticulture with emphasis on plant domestication, morphology, classification, world food crops, commodities, gardens, propagation, and agrochemicals.

Effective: Summer 2013

HORT 150 (GN)

Plants in the Human Context (3) An introduction to the many fascinating and vital relationships between plants and human society.

Effective: Summer 2013

INART 050 (GN)

The Science of Music (3) Waves, physics of sound, hearing, musical scales, musical instruments, and room acoustics.

Effective: Spring 2012

MATSE 081 (GN;IL)

Materials in Today's World (3) A survey of the properties, manufacture, and uses of polymers, ceramics and metals in today's world with emphasis on modern developments and new materials.

Effective: Summer 2005

MATSE 091 (GN)

Polymers, Life and Society (3) An exploration of the science and use of polymer materials and their impact on society using a case study approach.

Effective: Summer 2005

MATSE 101 (EGEE 101) (GN)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Fall 2007

MATSE 101A (EGEE 101A) (GN;IL)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Fall 2007

MATSE 112 (GN)

Applied Materials Chemistry for Engineers (3) Chemistry of materials with emphasis on intermolecular forces between atoms, molecules, ions, and dense materials and inorganic and organic physical chemistry. In most majors, this course is not a substitute for CHEM 013 or CHEM 112.

Effective: Spring 2009

Prerequisite: CHEM 110

METEO 002 (GN)

Our Changing Atmosphere: Personal and Societal Consequences (3) A survey of meteorology emphasizing how the nature of our lives, individually/societally, depends upon atmospheric structure, quality, and processes.

Effective: Spring 2003

METEO 003 (GN)

Introductory Meteorology (3) Nontechnical treatment of fundamentals of modern meteorology and the effects of weather and climate. A student who took METEO 002 may take the laboratory part of this course for 1 credit only.

Effective: Spring 2003

METEO 004 (GN)

Weather and Risk (3) Non-technical introduction to the science and historical development of meteorology, and the role of weather forecasting as a tool for risk management by individuals, businesses, and societies.

Effective: Summer 2007

METEO 005 (GN)

Severe and Unusual Weather (3) Non-technical introduction to the physical processes important in the formation of various severe and unusual weather phenomena.

Effective: Summer 2011

METEO 101 (GN)

Understanding Weather Forecasting (3) Fundamental principles of synoptic and physical meteorology, satellite and radar imagery, and data analysis in the setting of mid-latitude weather forecasting.

Effective: Fall 2001

METEO 122 (AGECO 122) (GN)

Atmospheric Environment: Growing in the Wind (3) Students will learn about the effect of weather on plants, animals, and humans.

Effective: Summer 2006

MICRB 106 (GN)

Elementary Microbiology (3) Importance of microorganisms in health and disease, agriculture, and industry; descriptive course for students not planning advanced study in microbiology. The combination of MICRB 106 GN and 107 GN must be taken to receive General Education credit in biology. Students must take a combination of MICRB 106 GN and 107 GN to receive General Education credit in biology.

Effective: Spring 2002

MICRB 107 (GN)

Elementary Microbiology Laboratory (1) Selected techniques used to observe, identify and count bacteria; effects of chemical and physical agents on microorganisms. The combination of MICRB 106 GN and 107 GN must be taken to receive General Education credit in biology. Students must take a combination of MICRB 106 GN and 107 GN to receive General Education credit in biology.

Effective: Spring 2002

Prerequisite: or concurrent: MICRB 106

PHYS 001 (GN)

The Science of Physics (3) Historical development and significance of major concepts, with emphasis on the nature of physics and its role in modern life. (For students in non-mathematical fields.)

Effective: Fall 2004

PHYS 010 (GN)

Physics Behind the Headlines (3) Select topics in modern physics with emphasis on understanding science related articles in the news (For students in non-mathematical fields.)

Effective: Summer 2013

PHYS 150 (GN)

Technical Physics I (3) Elementary treatment of topics in mechanics, heat, wave motion, and sound leading toward an understanding of technical applications.

Effective: Spring 2007

Prerequisite: 1 1/2 units of algebra. Prerequisite or concurrent: MATH 021 or MATH 081

PHYS 150L (GN)

Technical Physics I (3) Elementary treatment of topics in mechanics, heat, wave motion, and sound leading toward an understanding of technical applications.

Effective: Summer 1994

PHYS 150P (GN)

Technical Physics I (3) Elementary treatment of topics in mechanics, heat, wave motion, and sound leading toward an understanding of technical applications.

Effective: Summer 1994

PHYS 151 (GN)

Technical Physics II (3) Elementary treatment of topics in electricity, light, and modern physics leading toward an understanding of technical applications.

Effective: Fall 2001

Prerequisite: PHYS 150

PHYS 151L (GN)

Technical Physics II (3) Elementary treatment of topics in electricity, light, and modern physics leading toward an understanding of technical applications.

Effective: Fall 2001

Prerequisite: PHYS 150

PHYS 211 (GN)

General Physics: Mechanics (4) Calculus-based study of the basic concepts of mechanics: motion, force, Newton's laws, energy, collisions, and rotation.

Effective: Fall 1999

PHYS 211H (GN)

General Physics: Mechanics (4) Calculus-based study of the basic concepts of mechanics: motion, force, Newton's laws, energy, collisions, rotation, and oscillations.

Effective: Spring 2012

PHYS 211L (GN)

General Physics: Mechanics (0-4) Calculus-based study of the basic concepts of mechanics: motion, force, Newton's laws, energy, collisions, and rotation. NOTE: UP offers for 0 credits; Altoona offers for 4 credits.

Effective: Fall 2000

PHYS 211R (GN)

General Physics: Mechanics (4) Calculus-based study of the basic concepts of mechanics: motion, force, Newton's laws, energy, collisions, and rotation.

Effective: Spring 1999

PHYS 212 (GN)

General Physics: Electricity and Magnetism (4) Calculus-based study of the basic concepts of electricity and magnetism.

Effective: Fall 1999

Prerequisite: MATH 140 PHYS 211

PHYS 212H (GN)

General Physics: Electricity and Magnetism (4) Calculus-based study of the basic concepts of electricity and magnetism.

Effective: Summer 2012

Prerequisite: MATH 140 PHYS 211

PHYS 212L (GN)

General Physics: Electricity and Magnetism (0-4) Calculus-based study of the basic concepts of electricity and magnetism. NOTE: UP offers for 0 credits; Altoona offers for 4 credits.

Effective: Fall 2000

Prerequisite: MATH 140 PHYS 211

PHYS 212R (GN)

General Physics: Electricity and Magnetism (4) Calculus-based study of the basic concepts of electricity and magnetism.

Effective: Spring 2000

Prerequisite: MATH 140 PHYS 211

PHYS 213 (GN)

General Physics: Fluids and Thermal Physics (2) Calculus-based study of the basic concepts of fluids and sound, heat, kinetic theory, and entropy.

Effective: Fall 1999

Prerequisite: MATH 140 PHYS 211

PHYS 213L (GN)

General Physics: Fluids and Thermal Physics (0) Calculus-based study of the basic concepts of fluids and sound, heat, kinetic theory, and entropy.

Effective: Fall 1999

Prerequisite: MATH 140 PHYS 211

PHYS 213R (GN)

General Physics: Fluids and Thermal Physics (2) Calculus-based study of the basic concepts of fluids and sound, heat, kinetic theory, and entropy.

Effective: Fall 1999

Prerequisite: MATH 140 PHYS 211

PHYS 214 (GN)

General Physics: Wave Motion and Quantum Physics (2) Calculus-based study of the basic concepts of wave motion, geometrical optics, interference phenomena, photons, wave mechanics, and the structure of matter.

Effective: Spring 2004

Prerequisite: MATH 141 PHYS 211 and PHYS 212

PHYS 214L (GN)

General Physics: Wave Motion and Quantum Physics (0) Calculus-based study of the basic concepts of wave motion, geometrical optics, interference phenomena, photons, wave mechanics, and the structure of matter.

Effective: Spring 2004

Prerequisite: MATH 141 PHYS 211 and PHYS 212

PHYS 214R (GN)

General Physics: Wave Motion and Quantum Physics (2) Calculus-based study of the basic concepts of wave motion, geometrical optics, interference phenomena, photons, wave mechanics, and the structure of matter.

Effective: Spring 2004

Prerequisite: MATH 141 PHYS 211 and PHYS 212

PHYS 250 (GN)

Introductory Physics I (4) Selected topics in mechanics, heat, and sound.

Effective: Fall 2002

Prerequisite: MATH 022 MATH 026 ; or MATH 040 ; or MATH 041 or satisfactory performance on the mathematics proficiency examination

PHYS 250L (GN)

Introductory Physics I (0-4) Selected topics in mechanics, heat, and sound.

Effective: Spring 2010

Prerequisite: MATH 022 MATH 026 ; or MATH 040 ; or MATH 041 or satisfactory performance on the mathematics proficiency examination

PHYS 250P (GN)

Introductory Physics I (0) Selected topics in mechanics, heat, and sound.

Effective: Fall 2002

Prerequisite: MATH 022 MATH 026 ; or MATH 040 ; or MATH 041 or satisfactory performance on the mathematics proficiency examination

PHYS 250R (GN)

Introductory Physics I (4) Selected topics in mechanics, heat, and sound.

Effective: Fall 2002

Prerequisite: MATH 022 MATH 026 ; or MATH 040 ; or MATH 041 or satisfactory performance on the mathematics proficiency examination

PHYS 251 (GN)

Introductory Physics II (4) Selected topics in light, electricity, and magnetism.

Effective: Fall 2002

Prerequisite: PHYS 250

PHYS 251L (GN)

Introductory Physics II (0-4) Selected topics in light, electricity, and magnetism.

Effective: Fall 2010

Prerequisite: PHYS 250

PHYS 251P (GN)

Introductory Physics II (0) Selected topics in light, electricity, and magnetism.

Effective: Fall 2002

Prerequisite: PHYS 250

PHYS 251R (GN)

Introductory Physics II (4) Selected topics in light, electricity, and magnetism.

Effective: Fall 2002

Prerequisite: PHYS 250

PLANT 220 (GN)

Gardening for Fun and Profit (3) Fundamentals of designing, planting and maintaining residential landscapes and edible gardens for students with minimal/intermediate horticulture knowledge.

Effective: Summer 2015

PPEM 120 (GN)

The Fungal Jungle: A Mycological Safari From Truffles to Slime Molds (3) This course is an introduction to the world of fungi and their impact on humans and the environment around us.

Effective: Spring 2014

PPEM 300 (GN)

Horticultural Crop Diseases (3) Diseases of horticultural crops are examined stressing their cause, diagnosis, management and national and international importance.

Effective: Spring 2014

Prerequisite: 3 credits in a biological science

R SOC 134 (AGECO 134) (GN)

Sustainable Agriculture Science and Policy (3) The science, socio-economics, and politics of managing food and fiber production systems. Sustainability implications of current practices and future options.

Effective: Summer 2013

S T S 055 (AERSP 055) (GN)

Space Science and Technology (3) The science and technology of space exploration and exploitation; physical principles; research and development; history, space policy, and social implications.

Effective: Spring 1994

S T S 150 (EM SC 150) (GN;IL)

Out of the Fiery Furnace (3) A history of materials, energy, and humans, with emphasis on their interrelationships. For nontechnical students.

Effective: Spring 2006

S T S 201 (GN)

Climate Change, Energy, and Biodiversity (3) Studies of global warming, energy options, and biodiversity; their interrelations as sciences and as societal issues.

Effective: Summer 1994

SC 200 (GN)

Science in Our World: Certainty and Controversy (3) A science appreciation course, aimed at making non-scientists more informed consumers of science.

Effective: Summer 2010

SOILS 071 (GN;IL)

Environmental Sustainability (3) An introduction to environmental science, exploring sustainable human- environment interactions with examples from environmental soil science.

Effective: Summer 2013

SOILS 101 (GN)

Introductory Soil Science (3) A study of soil properties and processes and relationships to land use, plant growth, environmental quality, and society.

Effective: Summer 2013

VB SC 211 (GN)

The Immune System and Disease (3) Introduction to the immune system that emphasizes the immune response to infection and consequences of a defective immune response.

Effective: Fall 2007

W F S 209 (GN)

Wildlife and Fisheries Conservation (3) Survey of current and historical issues in wildlife and fisheries conservation; emphasis on vertebrate biodiversity, habitat management and protection, and populations.

Effective: Spring 2016

Prerequisite: BIOL 110

Arts

All course descriptions are updated periodically.

187 courses.

A ED 211 (GA)

Interpreting Art Experience: Social and Behavioral Perspectives (3) Examination of psychological, cultural, aesthetic, philosophical and educational perspectives on creation and response to art in children, adolescents and adults.
Effective: Summer 2002

A ED 225 (GA;US)

Diversity, Pedagogy, and Visual Culture (3) Issues of diversity in art, education, visual culture, and pedagogy.
Effective: Summer 2005

A&A 100 (GA;IL)

Introduction to International Arts (3) An interdisciplinary, multicultural introduction to the arts of the world.
Effective: Summer 2005

A&A 121 (GA)

Design Thinking and Creativity (3) An introductory and multidisciplinary exploration of the theory, process, methods, and artifacts of design, achieved through an examination of ideas, examples, and applications.
Effective: Summer 2015

AF AM 126 (INART 126) (GA;US)

The Popular Arts in America: The History of Hip-Hop (3) An examination of the roots, development, and significance of hip-hop in our culture.
Effective: Summer 2014

AF AM 208 (THEA 208) (GA;US;IL)

Theatre Workshop in Diverse Cultures (3) A performance-oriented class which explores the historic and contemporary theatrical works of various culturally diverse peoples.
Effective: Spring 2013

AM ST 307 (ART H 307) (GA;US)

American Art (3) History of art in the English colonies and the United States from the seventeenth century to the present.
Effective: Spring 2008

AM ST 308 (ART H 308) (GA;US)

American Architecture (3) History of the architecture of the United States, as well as its Native American and colonial antecedents.
Effective: Summer 2013

ANTH 220 (GA;GH;IL)

Anthropology and Art/ifacts (3) This course examines anthropological approaches to the study of art works, their production, and function in diverse human societies, both past and present.
Effective: Summer 2012

ARCH 100 (GA)

Architecture and Ideas (3) General introduction to world architecture, emphasizing the relationship between concepts, philosophies, values and ideologies in shaping the built environment.
Effective: Summer 2011

ARCH 210 (GA)

Introduction to Architecture and Planning Theories (3) The course introduces architectural and urban theory by presenting and exploring key concepts through major texts from the Western tradition.
Effective: Spring 2009

ARCH 211 (GA)

Contemporary Design and Planning Theories II (3) Continuation of ARCH 210, with an in-depth analysis and study of significant and current environmental constructs and issues.
Effective: Summer 1995
Prerequisite: ARCH 210

ARCH 316 (GA)

Analysis of Human Settlements: Cities (3) Analysis of the interrelated factors which determined and shaped the various types of early cities through the nineteenth century.
Effective: Summer 1989

ART 001 (GA)

Introduction to the Visual Arts (3) Introduction to the media, elements, function, making, and meaning of visual arts today and in diverse historical and cultural contexts.
Effective: Spring 2004

ART 002 (GA)

Interactive Learning and Web-Design (3) Introduce students to research on-line, preparing verbal, visual and other elements for presentation of outcomes and posting them to the Internet.
Effective: Fall 2001

ART 003 (GA)

Visual Images on the Web (3) Introduce students to using visual images for communication on the World Wide Web.
Effective: Fall 2001

ART 010 (GA)

Introduction to Visual Studies (3) Introduction to visual studies; pictorial space and the principles of visual organization.
Effective: Fall 2004

ART 017 (GA)

Introduction to Metal Arts (3) Introduction for non-art majors to fundamental jewelry making and small-scale metalsmithing processes including fabrication, surface treatment, and finishing of metalwork.
Effective: Spring 2004

ART 020 (GA)

Introduction to Drawing (3) Introductory experience in making of art through drawing media; designed for non-majors seeking general overview of studio practice.
Effective: Spring 2004

ART 030 (GA)

Introduction to Sculpture (3) Introduction to sculpture for non-art majors consisting of lectures/basic studio work coordinated to cover broad range of processes.
Effective: Fall 2004

ART 040 (GA)

Introduction to Printmaking (3) Instruction and practice in elementary printmaking and papermaking processes.
Effective: Fall 2004

ART 050 (GA)

Introduction to Painting (3) Introductory experience in making of art through painting media; designed for non-majors seeking a general overview of studio practice.
Effective: Fall 2004

ART 080 (GA)

Introduction to Ceramics (3) Introduction to the concepts and techniques fundamental to the making of pottery and ceramic sculpture.
Effective: Spring 2004

ART 100 (GA)

Concepts and Creation in the Visual Arts (3) A study of the personal and cultural foundations of artistic creation and practice of creative production in the art studio.
Effective: Spring 2004

ART 101 (GA)

Introduction to Web Design (3) A beginning level course in Web Design, with emphasis on designing with standards to assure accessibility and effective communication.
Effective: Spring 2008

ART 102 (GA)

Beginning Computer Aided Design for Artists (3) ART 102 explores the computer as artistic media. Student creations are realized through 3D printing, vinyl cutting, and laser engraving.
Effective: Summer 2014

ART 165 (GA)

Artistic Concepts of Space (3) A studio course that utilizes lecture and varied media experiences to investigate space as artistic expression.
Effective: Fall 2012

ART 166 (GA)

Artistic Concepts of Form (3) A studio course that utilizes lecture and varied media experiences to investigate form in artistic expression.
Effective: Fall 2012

ART 168 (GA)

The Digital Medium (3) A studio course where the computer is introduced as an artistic media.
Effective: Fall 2012

ART H 001S (GA)

First-Year Seminar (3) An introduction to the field of art history, through an examination of a selected issue in a seminar setting.
Effective: Fall 2000

ART H 100 (GA;IL)

Introduction to Art (3) An approach to the understanding of art through a critical analysis of selected works of architecture, painting, and sculpture. Students who have passed ART H 110 may not schedule this course.
Effective: Spring 2006

ART H 105 (GA)

Pictures and Power (3) An introduction to strategies for analyzing the political effects, uses and interpretation of popular imagery.
Effective: Spring 2015

ART H 111 (GA;IL)

Ancient to Medieval Art (3) Survey of Ancient Egyptian, Greek, Roman, Byzantine, Early Medieval, Romanesque, and Gothic art, with an emphasis on sculpture and painting.

Effective: Spring 2006

ART H 111U (GA;IL)

Ancient to Medieval Art Honors (3) Honors Survey of Ancient Egyptian, Greek, Roman, Byzantine, Early Medieval, Romanesque, and Gothic art, with an emphasis on sculpture and painting.

Effective: Spring 2016

ART H 112 (GA;IL)

Renaissance to Modern Art (3) Survey of Renaissance, Baroque, Rococo, Romantic, Modern, and Contemporary art, with an emphasis on painting, sculpture, and graphic arts.

Effective: Spring 2006

ART H 112U (GA;IL)

Renaissance to Modern Art Honors (3) Honors Survey of Renaissance, Baroque, Rococo, Romantic, Modern, and Contemporary art, with an emphasis on painting, sculpture, and graphic arts.

Effective: Spring 2016

ART H 120 (GA;IL)

Asian Art and Architecture (3) A selective overview of the art and architecture of India, Southeast Asia, China, Korea, and Japan.

Effective: Summer 2005

ART H 130 (GA;US;IL)

Art of Africa, Oceania, and the Americas (3) A selective overview of the indigenous art of Africa, Oceania and the Americas.

Effective: Spring 2013

ART H 140 (GA;IL)

Introduction to the Art and Architecture of the Mayas, Aztecs, and Incas (3) This course examines the artistic and architectural production of Pre-Columbian Mesoamerica and the Andes.

Effective: Spring 2016

ART H 201 (GA;IL)

Ancient to Medieval Architecture (3) A survey of Prehistoric, Ancient Near Eastern Egyptian, Greek, Roman, Early Christian, Byzantine, Early Medieval, Romanesque, and Gothic architecture.

Effective: Spring 2006

ART H 202 (GA;US;IL)

Renaissance to Modern Architecture (3) A survey of Renaissance, Baroque, Rococo, Romantic, Victorian, Modern, Post-Modern, and Contemporary architecture in Europe and America.

Effective: Spring 2006

ART H 225 (ENGL 225, WMNST 225) (GA;GH)

Sexuality and Modern Visual Culture (3) An examination of the visual expression of gender and sexual identities in English-speaking cultures since the late nineteenth century.

Effective: Summer 2009

ART H 226 (GA)

The Comic Book: A History of Sequential Art (3) An overview and examination of the history of sequential art with a focus on comic books and graphic novels.

Effective: Summer 2012

ART H 301 (GA;IL)

Egyptian and Mesopotamian Art (3) Art of the Ancient Near East, including Egypt, Mesopotamia, and neighboring civilizations.

Effective: Spring 2006

ART H 302 (GA;IL)

Art of the Early Middle Ages (3) A survey of the art of Western Europe from the Early Christian era through the Ottonian Empire, c.300-1050 A.D.

Effective: Spring 2006

ART H 303 (GA;IL)

Italian Renaissance Art (3) The major arts in Italy from the thirteenth century A.D. through the Renaissance; emphasis on sculpture and painting.

Effective: Spring 2006

ART H 304 (GA;IL)

Italian, Spanish, and Spanish Colonial Baroque Art and Architecture (3) A survey of painting, sculpture, and architecture in Italy, Spain, and the Spanish Americas from 1600-1750.

Effective: Fall 2010

ART H 305 (GA;IL)

Romanticism and Revolution (3) A survey of painting and sculpture in Europe 1780-1860, from the origins of Neoclassicism through Romanticism and Realism.

Effective: Fall 2012

ART H 307 (AM ST 307) (GA;US)

American Art (3) History of art in the English colonies and the United States from the seventeenth century to the present.
Effective: Spring 2008

ART H 308 (AM ST 308) (GA;US)

American Architecture (3) History of the architecture of the United States, as well as its Native American and colonial antecedents.
Effective: Summer 2013

ART H 311 (GA;IL)

Greek and Roman Art (3) Greek and Roman art, with emphasis on painting and sculpture.
Effective: Spring 2006

ART H 312 (GA;IL)

Romanesque and Gothic Art (3) Survey of the architecture, sculpture, and painting of the Christian church in western Europe from 1000 to 1500.
Effective: Spring 2006

ART H 313 (GA;IL)

Northern Renaissance Art (3) Art in northern Europe in the fifteenth and sixteenth centuries, emphasizing painters such as Van Eyck, Durer, and Bruegel.
Effective: Spring 2006

ART H 314 (GA;IL)

Art in the Age of Rembrandt (3) Dutch and Flemish painting in the seventeenth century.
Effective: Spring 2006

ART H 315 (ASIA 315) (GA;IL)

Architecture and Art of South and Southeast Asia (3) Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present.
Effective: Summer 2010

ART H 320 (GA;IL)

Chinese Art (3) A general survey of the great periods of Chinese art from the Shang dynasty until the modern period.
Effective: Summer 2005

ART H 325 (GA;IL)

Impressionism to Surrealism (3) A survey of European painting and sculpture from ca. 1850 to ca. 1940.
Effective: Spring 2006

ART H 326 (GA;US;IL)

Art Since 1940 (3) An international survey of painting, sculpture, photography and other media since 1940.
Effective: Summer 2012

ART H 330 (GA;IL)

Islamic Architecture and Art (3) Survey of the art and architecture of Islamic lands from the late seventh century until the eighteenth century.
Effective: Summer 2005

ART H 335 (AFR 335) (GA;IL)

African Art (3) Introduction to the visual arts of Africa, including contemporary African art and the influence of African art outside Africa.
Effective: Fall 2013

ASIA 315 (ART H 315) (GA;IL)

Architecture and Art of South and Southeast Asia (3) Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present.
Effective: Summer 2010

BRASS 100J (GA)

Trumpet: Secondary (1 per semester, maximum of 8) Individual instruction in trumpet one-half hour per week.
Effective: Fall 2004
Prerequisite: permission of instructor

BRASS 101J (GA)

French Horn: Secondary (1 per semester, maximum of 8) Individual instruction in French horn one-half hour per week.
For students who qualify.
Effective: Fall 2004
Prerequisite: permission of instructor

BRASS 102J (GA)

Trombone: Secondary (1 per semester, maximum of 8) Individual instruction in trombone one-half hour per week.
Effective: Fall 2004
Prerequisite: permission of instructor

BRASS 103J (GA)

Euphonium: Secondary (1 per semester, maximum of 8) Individual instruction in euphonium/baritone one-half hour per week.
Effective: Fall 2004
Prerequisite: permission of instructor

BRASS 104J (GA)

Tuba: Secondary (1 per semester, maximum of 8) Individual instruction in tuba one-half hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 110J (GA)

Trumpet: Secondary (2 per semester, maximum of 16) Individual instruction in trumpet one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 111J (GA)

French Horn: Secondary (2 per semester, maximum of 16) Individual instruction in French horn one hour per week. For students who qualify.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 112J (GA)

Trombone: Secondary (2 per semester, maximum of 16) Individual instruction in trombone one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 113J (GA)

Euphonium: Secondary (2 per semester, maximum of 16) Individual instruction in euphonium/baritone one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

BRASS 114J (GA)

Tuba: Secondary (2 per semester, maximum of 16) Individual instruction in tuba one hour per week.

Effective: Fall 2004

Prerequisite: permission of instructor

COMM 150 (GA)

The Art of the Cinema (3) The development of cinema to its present state; principles of evaluation and appreciation; examples from the past and present.

Effective: Spring 2007

COMM 150H (GA)

The Art of the Cinema (3) The development of cinema to its present state; principles of evaluation and appreciation; examples from the past and present.

Effective: Spring 2007

COMM 250 (GA)

Film History and Theory (3) Exploration of film theory and criticism in the context of aesthetic, technological, and economic evolution of film history.

Effective: Spring 2004

Prerequisite: COMM 150

DANCE 100 (GA;US;IL)

Dance Appreciation (3) Explore dance as a vital, communicative and performing art, reflecting social values and cultural beliefs.

Effective: Fall 2007

DANCE 230 (GA)

Ballet (1.5 per semester/maximum of 6) An exploration of Ballet technique.

Effective: Summer 2012

DANCE 240 (GA)

Jazz Dance (1.5 per semester/maximum of 6) An exploration of jazz dance technique throughout history.

Effective: Summer 2012

DANCE 250 (GA)

Tap Dance (1.5 per semester/maximum of 6) An exploration of tap dance technique throughout history.

Effective: Summer 2012

DANCE 261 (GA)

Beginning Modern Dance I (1.5 per semester/maximum of 6) Introduction to modern dance as an art form; development of dance technique and composition; teaching methods for improvisational skills.

Effective: Spring 2013

DANCE 361 (GA)

Intermediate Modern Dance I (1.5 per semester/maximum of 6) Development of techniques and principles of modern dance on the intermediate level.

Effective: Spring 2013

Prerequisite: DANCE 262

DANCE 362 (GA)

Intermediate Modern Dance II (1.5 per semester/maximum of 6) A continuation of Modern Dance I to augment technical proficiency.

Effective: Spring 2013

Prerequisite: DANCE 361

ENGL 050 (GA)

Introduction to Creative Writing (3) Practice and criticism in the reading, analysis and composition of fiction, nonfiction and poetry writing.

Effective: Spring 2001

ENGL 050H (GA)

Introduction to Creative Writing (3) Practice and criticism in the reading, analysis and composition of fiction, nonfiction and poetry writing.

Effective: Summer 2012

ENGL 225 (ART H 225, WMNST 225) (GA;GH)

Sexuality and Modern Visual Culture (3) An examination of the visual expression of gender and sexual identities in English-speaking cultures since the late nineteenth century.

Effective: Summer 2009

GAME 220 (GA)

Introduction to Game Design (3) Design of games as aesthetic objects and cultural artifacts that people find meaningful and entertaining.

Effective: Spring 2014

GD 100 (GA)

Introduction to Graphic Design (3) A beginning level graphic design course. Instruction touches on the practice, theories, history and processes of the graphic design industry.

Effective: Spring 2006

INART 001 (GA)

The Arts (3) Develop critical perception, knowledge, and judgments through an examination of the basic concepts common among the arts.

Effective: Spring 2006

INART 003 (GA)

Reception of the Arts (3) This course considers how art uses time, space, and causality to define culture and the human condition.

Effective: Spring 2004

INART 005 (GA)

Performing Arts (3) Introduction to music, dance, and theatre. Orientation to the aesthetics, theory, and practice of professional performance.

Effective: Summer 2012

INART 010 (GA)

The Popular Arts in America: Mass Media Arts (3) An introduction to the arts of the mass media with emphasis on how film, radio, television, and the print media influence and reflect society.

Effective: Summer 2012

INART 015 (GA)

The Popular Arts in America: Performing Arts (3) The development of the performing arts of American popular culture; emphasis on popular music, dance, theatre, and variety arts.

Effective: Spring 2004

INART 055 (GA)

History of Electroacoustic Music (3) A history of electroacoustic music as a consequence of developments in culture and technology from 1880 to present.

Effective: Summer 2012

INART 062 (GA;US;IL)

West African and African American Arts: from the 1960s to the present (3) An introduction to West African and African American Arts from the 1960s to the present.

Effective: Summer 2014

INART 100 (GA)

Seminar in Integrative Arts (3) A study of various arts with emphasis on comparison, contrast, and other aspects of interrelation. Topics will change each semester.

Effective: Spring 2004

INART 100W (GA)

Seminar in Integrative Arts (3) A study of various arts with emphasis on comparison, contrast, and other aspects of interrelation. Topics will change each semester.

Effective: Summer 2012

INART 110 (GA)

The Dramatic Arts in the Mass Media (3) The place of television-radio-film drama in our culture; relationship with other art forms; standards of evaluation.

Effective: Summer 2012

INART 115 (GA;US)

The Popular Arts in America: Popular Music (3) An examination of the roots, development, and significance of popular music in our culture.

Effective: Summer 2013

INART 116 (GA;US)

The Popular Arts in America: The History of Rock and Roll-The 1950s (3) This course examines the roots, development, and significance of rock and roll music in its first decade.
Effective: Summer 2012

INART 125 (GA;US;IL)

The Popular Arts in America: The History of Rock and Roll - Punk Rock (3) An examination of the roots, development, and significance of punk rock in our culture.
Effective: Summer 2012

INART 126 (AF AM 126) (GA;US)

The Popular Arts in America: The History of Rock and Roll - Hip-Hop (3) An examination of the roots, development, and significance of hip-hop in our culture.
Effective: Spring 2014

INART 200 (GA)

The Popular Arts in America: Elvis Presley - The King of Rock and Roll (3) The significance and influence of Elvis Presley as an artist and cultural force focusing on his recordings and major performances.
Effective: Summer 2013

INART 205 (GA)

Introducing the Beatles (3) The influence and achievement of the Beatles as artists focusing on their recordings and films as sociocultural artifacts.
Effective: Summer 2008

INART 210 (GA)

Integrative Approaches to Computer-Aided Music Composition (3) Interdisciplinary introduction to music composition using software to assist with notation; historical perspectives drawn from art, dance, theater, and literature.
Effective: Fall 2004
Prerequisite: MUSIC 008 or instructor permission

INART 215 (GA)

The Craft of Singing (3) Vocal and breathing anatomy and technique, vocal health and classifications, posture, and beginning acting/movement techniques for singers.
Effective: Summer 2014
Prerequisite: MUSIC 052 MUSIC 104 VOICE 110J or THEA 112

INART 220 (GA;US)

Stand-Up Comedy: A Cultural History (3) An American cultural history from mid-19th through mid-20th Century as seen through the prism of stand-up comedy.
Effective: Summer 2013
Prerequisite: sophomore standing

INART 236 (GA)

Integrating Music and Animation with Technology (3) An introduction to the theory, design and creation of musical animations. For general students.
Effective: Summer 2011

INART 258A (GA)

Fundamentals of Digital Audio (3) A thorough introduction to digital music production technologies, covering fundamentals of how digital musical information is stored, processed and transmitted.
Effective: Spring 2012
Prerequisite: MUSIC 008 or concurrent enrollment in either MUSIC 131 or MUSIC 132

INART 258B (GA)

Fundamentals of Digital Audio (1) A general overview of music technologies current to music educators and performers.
Effective: Spring 2012

IST 130 (GA)

Emerging Technologies in Popular Culture (3) A survey course that explores emerging technologies used to produce and consume popular cultural artifacts.
Effective: Summer 2009

KEYBD 100J (GA)

Piano: Secondary (1 per semester, maximum of 8) Individual instruction in piano one-half hour per week.
Effective: Fall 2004
Prerequisite: permission of instructor

KEYBD 101J (GA)

Organ: Secondary (1 per semester, maximum of 8) Individual instruction in pipe organ one-half hour per week.
Effective: Fall 2004
Prerequisite: permission of instructor

KEYBD 110J (GA)

Piano: Secondary (2 per semester, maximum of 16) Individual instruction in piano one hour per week.
Effective: Fall 2004
Prerequisite: permission of instructor

KEYBD 111J (GA)

Organ: Secondary (2 per semester, maximum of 16) Individual instruction in pipe organ one hour per week.
Effective: Fall 2004
Prerequisite: permission of instructor

LARCH 060 (GA;US;IL)

History of Design on the Land (3) A survey of the historical development of outdoor space in relationship to allied arts from early beginnings to this century. Students may take only one course for General Education credit from LARCH 003 GA or 060 GA.

Effective: Fall 2010

LARCH 065 (GA;US;IL)

Built Environment and Culture (3) Investigates the relationship between socio-cultural practices and the development and organization of contemporary built environments.

Effective: Summer 2005

MUSIC 004 (GA)

Film Music (3) An introductory examination of music's role in Hollywood narrative film from the classic era (1930s and 1940s) to the present.

Effective: Summer 2009

MUSIC 005 (GA)

An Introduction to Western Music (3) A general survey of art music in western society, highlighting important composers and stylistic developments.

Effective: Spring 2004

MUSIC 005S (GA)

An Introduction to Western Music (3) A general survey of art music in western society, highlighting important composers and stylistic developments.

Effective: Summer 2006

MUSIC 007 (GA;US)

Evolution of Jazz (3) Study of the origins and development of jazz as an art form.

Effective: Summer 2005

MUSIC 008 (GA)

Rudiments of Music (3) Introduction to the elements of music: notation, scales, meter, rhythm, intervals; basic chord structure.

Effective: Fall 2004

MUSIC 009 (GA;IL)

Introduction to World Musics (3) An overview of the music of India, China, Japan, Indonesia, Africa, and the Middle East.

Effective: Summer 2005

MUSIC 011 (GA)

Under the Hood: How Classical Music Works (3) An introductory examination of classical music, drawing together aspects of theory and repertoire to understand how the music works.

Effective: Summer 2013

MUSIC 050 (GA)

Beginning Piano: Non-Music Major (1) Introduction to the keyboard, notation, chord progressions, transposition, improvisation, and simple accompanying techniques for the non-music major. An additional fee is required for this course.

Effective: Fall 2004

MUSIC 051 (GA)

Intermediate Class Piano: Non-Music Major (1) Instruction in harmonizing melodies, accompanying techniques, improvisation, and repertoire.

Effective: Fall 2004

Prerequisite: MUSIC 050 or placement audition

MUSIC 052 (GA)

Voice CClass: Non-Music Major (1) Group study emphasizing development of rudimentary skills and their recreational use in a range of popular and art music.

Effective: Fall 2004

MUSIC 053 (GA)

Class Voice Practicum (1) Voice study in group and individual formats, supervised by in-class lessons and discussions, enhanced by additional individual instruction with pedagogy students.

Effective: Fall 2004

Prerequisite: audition

MUSIC 054 (GA)

Beginning Class Guitar: Non-Music Major (1) Class instruction in guitar for non-music majors.

Effective: Fall 2004

MUSIC 077 (GA)

Philharmonic Orchestra (1 per semester/maximum of 8) Orchestra rehearsal and performance.

Effective: Fall 2004

Prerequisite: audition

MUSIC 078 (GA)

Symphonic Wind Ensemble (1 per semester/maximum of 8) Rehearsal and performance of wind repertoire and concert band literature.

Effective: Fall 2004

Prerequisite: audition

MUSIC 080 (GA)

Symphonic Band (1 per semester/maximum of 8) Rehearsal and performance of symphonic band literature. A select group using standard instrumentation.

Effective: Fall 2004

Prerequisite: audition

MUSIC 081 (GA)

Marching Blue Band (1 per semester/maximum of 4) Rehearsal and performance of appropriate music and maneuvers for football games and related events.

Effective: Fall 2004

Prerequisite: audition

MUSIC 082 (GA)

Concert Band (1 per semester/maximum of 8) Rehearsal and performance of concert band literature.

Effective: Fall 2004

Prerequisite: audition

MUSIC 083 (GA)

Campus Band (1 per semester/maximum of 8) Rehearsal and performance of concert band literature.

Effective: Spring 2002

Prerequisite: audition

MUSIC 084 (GA)

Jazz Ensemble (1 per semester/maximum of 8) Survey and performance of historic and contemporary big band styles.

Effective: Fall 2004

Prerequisite: audition

MUSIC 086 (GA)

Percussion Ensemble (1 per semester/maximum of 8) Study and performance of percussion chamber music in various instrumental combinations, focusing on the classical and contemporary repertoire.

Effective: Spring 2004

Prerequisite: audition

MUSIC 088 (GA)

Campus Choir (1 per semester/maximum of 8) Building skills needed for successful choral singing including vocal production, sight singing, ear training, and music fundamentals.

Effective: Fall 2001

MUSIC 089 (GA)

University Choir (1 per semester/maximum of 8) Rehearsal and performance of choral repertoire appropriate to mixed-voice ensemble of 100-150 voices.

Effective: Spring 2004

Prerequisite: audition

MUSIC 090 (GA)

Glee Club (1 per semester/maximum of 8) Rehearsal and performance of music composed for male voices from the sixteenth to the twentieth centuries, including sacred and secular compositions.

Effective: Spring 2004

Prerequisite: audition

MUSIC 091 (GA)

Oriana Singers (1 per semester/maximum of 8) Rehearsal and performance of choral repertoire for treble voices from the sixteenth to twentieth centuries, including sacred and secular compositions.

Effective: Spring 2004

Prerequisite: audition

MUSIC 092 (GA)

Chamber Music for Voices (1 per semester/maximum of 8) Select groups of singers performing choral chamber music.

Effective: Spring 2004

Prerequisite: audition

MUSIC 093 (GA;US;IL)

Essence of Joy (1 per semester, maximum of 8) Rehearsal and performance of choral repertoire from the African/American tradition.

Effective: Spring 2006

Prerequisite: audition

MUSIC 094 (GA)

Women's Chorale (1 per semester, maximum of 8) Rehearsal and performance of treble choral literature.

Effective: Spring 2004

Prerequisite: audition

MUSIC 100 (GA)

Campus Orchestra (1 per semester/maximum of 10) Rehearsal and performance orchestral literature.

Effective: Fall 2012

Prerequisite: audition

MUSIC 103 (GA)

Concert Choir (1 per semester/maximum of 8) Rehearsal and performance of choral repertoire appropriate to

mixed-voice ensemble of approximately sixty voices.

Effective: Spring 2004

Prerequisite: audition

MUSIC 104 (GA)

Chamber Singers (1 per semester/maximum of 8) Rehearsal and performance of choral repertoire appropriate to mixed-voice ensemble of approximately twenty-four voices.

Effective: Spring 2004

Prerequisite: audition

MUSIC 106 (GA)

Early Music Ensemble (1 per semester/maximum of 8) Ensemble for the performance and study of Baroque or early music on instruments of the era.

Effective: Spring 2004

Prerequisite: audition

MUSIC 109 (GA)

The Music of the Beatles (3) This course will consider the music of the Beatles by examining how John Lennon, Paul McCartney, and George Harrison developed as songwriters.

Effective: Spring 2013

MUSIC 190 (GA)

Chamber Music for Strings (1 per semester/maximum of 8) Preparation for performance of advanced chamber music literature involving primarily string instruments--string quartets, piano trios, clarinet quintets.

Effective: Spring 2004

Prerequisite: permission of instructor

MUSIC 191 (GA)

Chamber Music for Woodwinds (1 per semester/maximum of 8) Preparation for performance of advanced chamber music literature involving primarily woodwind instruments--woodwind quintets and quartets.

Effective: Spring 2004

Prerequisite: permission of instructor

MUSIC 192 (GA)

Chamber Music for Brass (1 per semester/maximum of 8) Preparation for performance of advanced chamber music literature involving primarily brass instruments--brass quartets and quintets.

Effective: Spring 2004

Prerequisite: permission of instructor

MUSIC 261 (GA;IL)

Survey of Music History I (3) A survey of music history to 1750, with readings, listening, and lecture.

Effective: Spring 2012

Prerequisite: MUSIC 131 MUSIC 162

MUSIC 262 (GA;IL)

Survey of Music History II (3) A survey of music history from 1750 to the present, with readings, listening, and lecture.

Effective: Spring 2012

Prerequisite: MUSIC 132 MUSIC 162

PERCN 100J (GA)

Percussion: Secondary (1 per semester, maximum of 8) Individual instruction in percussion one-half hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

PERCN 110J (GA)

Percussion: Secondary (2 per semester, maximum of 16) Individual instruction in percussion one hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

PHOTO 100 (GA)

Introduction to Photography (3) An introduction to the aesthetics, history, and science of photography including practical and critical approaches to the art of photography.

Effective: Spring 2006

STRNG 100J (GA)

Violin: Secondary (1 per semester, maximum of 8) Individual instruction in violin one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 101J (GA)

Viola: Secondary (1 per semester, maximum of 8) Individual instruction in viola one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 102J (GA)

Violoncello: Secondary (1 per semester, maximum of 8) Individual instruction in violoncello one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 103J (GA)

Double Bass: Secondary (1 per semester, maximum of 8) Individual instruction in double bass one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 110J (GA)

Violin: Secondary (2 per semester, maximum of 16) Individual instruction in violin one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 111J (GA)

Viola: Secondary (2 per semester, maximum of 16) Individual instruction in viola one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 112J (GA)

Violoncello: Secondary (2 per semester, maximum of 16) Individual instruction in violoncello one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

STRNG 113J (GA)

Double Bass: Secondary (2 per semester, maximum of 16) Individual instruction in double bass one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

THEA 080 (GA)

Pit Orchestra (1-3 per semester/maximum of 3) Rehearsal and performance of contemporary and historical musical theatre styles, including operetta and light opera.

Effective: Summer 2008

Prerequisite: audition

THEA 100 (GA;US;IL)

The Art of the Theatre (3) An experiential survey of all aspects of the living theatre, as presented by a resident company of theatre artists.

Effective: Spring 2006

THEA 102 (GA)

Fundamentals of Acting (3) Introduction to the art and craft of acting for non-theatre majors.

Effective: Fall 2003

THEA 105 (GA)

Introduction to Theatre (3) An introduction and overview of the history, craft, and art of the theatre to foster an informed appreciation of theatrical events. This course is an alternate to THEA 100.

Effective: Spring 2003

THEA 107 (GA)

Introduction to Dramatic Structure (3) An introduction to structural analysis in dramatic literature.

Effective: Summer 2011

THEA 112 (GA)

Introduction to Musical Theatre (3) A survey of music theatre as an art form.

Effective: Spring 2012

THEA 189 (GA)

Theatre Production Practicum (1 per semester/maximum of 6)* Supervised experience in theatre by crew participation in University theatre productions. For non-theatre students only.

Effective: Spring 2004

THEA 207 (GA;US)

Gender and Theatre (3) A study of theatre and drama literature as formed by issues of gender, race, and ethnic background.

Effective: Summer 2005

THEA 208 (AF AM 208) (GA;US;IL)

Workshop: Theatre in Diverse Cultures (3) A performance-oriented class which explores the historic and contemporary theatrical works of various culturally diverse peoples.

Effective: Spring 2013

THEA 208S (GA;US;IL)

Workshop: Theatre in Diverse Cultures (3) A performance-oriented class, which explores the historic and contemporary theatrical works of various culturally diverse peoples.

Effective: Summer 2005

THEA 282 (GA)

Production Practicum (3--may repeat once for a total of 6) Introduction to all aspects of theatre production--analysis, design, construction, production, performance--for non-theatre majors.

Effective: Spring 2000

VOICE 100J (GA)

Voice: Secondary (1 per semester, maximum of 8) Individual instruction in voice one-half hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

VOICE 110J (GA)

Voice: Secondary (2 per semester, maximum of 16) Individual instruction in voice one hour per week.

Effective: Spring 2004

Prerequisite: permission of instructor

WMNST 225 (ENGL 225, ART H 225) (GA;GH)

Sexuality and Modern Visual Culture (3) An examination of the visual expression of gender and sexual identities in English-speaking cultures since the late nineteenth century.

Effective: Summer 2009

WWNDS 100J (GA)

Flute: Secondary (1 per semester, maximum of 8) Individual instruction in flute one-half hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 101J (GA)

Oboe: Secondary (1 per semester, maximum of 8) Individual instruction in oboe one-half hour per week. For both music and non-music students.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 102J (GA)

Clarinet: Secondary (1 per semester, maximum of 8) Individual instruction in clarinet one-half hour per week. For both music and non-music students.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 103J (GA)

Bassoon: Secondary (1 per semester, maximum of 8) Individual instruction in bassoon one-half hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 104J (GA)

Saxophone: Secondary (1 per semester, maximum of 8) Individual instruction in saxophone one-half hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 110J (GA)

Flute: Secondary (2 per semester, maximum of 16) Individual instruction in flute one hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 111J (GA)

Oboe: Secondary (2 per semester, maximum of 16) Individual instruction in oboe one hour per week. For both music and non-music students.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 112J (GA)

Clarinet: Secondary (2 per semester, maximum of 16) Individual instruction in clarinet one hour per week. For both music and non-music students.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 113J (GA)

Bassoon: Secondary (2 per semester, maximum of 16) Individual instruction in bassoon one hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

WWNDS 114J (GA)

Saxophone: Secondary (2 per semester, maximum of 16) Individual instruction in saxophone one hour per week. For both music and non-music majors.

Effective: Spring 2004

Prerequisite: permission of instructor

Humanities

All course descriptions are updated periodically.

500 courses.

AAS 100 (AM ST 160) (GH;US)

Introduction to Asian American Studies (3) An introduction to the history, literature, and culture of Asian America.

Effective: Fall 2013

AF AM 083S (GH;US;IL)

First-Year Seminar in African American Studies (3) Cultural, philosophical, economic, political, and global dynamics of the Black experience in the United States and the Diaspora.

Effective: Fall 2013

AF AM 101 (WMNST 101) (GH;US)

The African American Woman (3) The sociological, historical, and political experiences of African American women, their roles and contributions to society.

Effective: Spring 2013

AF AM 101U (GH;US)

The African American Woman (3) The sociological, historical, and political experiences of African American women, their roles and contributions to society.

Effective: Fall 2016 Ending: Fall 2016

AF AM 102 (WMNST 102) (GH;IL)

Women of Color: Cross-Cultural Perspective (3) Global examination of value systems of women of color; attention to minority ethnic groups in the United States and developing countries.

Effective: Spring 2013

AF AM 110 (GH;US)

Introduction to African American Studies (3) An introductory survey of African American Studies practice and scholarship, focused on the major methods, figures, texts, and debates that define the field.

Effective: Spring 2013

AF AM 110U (GH;US)

Introduction to African American Studies (3) An introductory survey of African American Studies practice and scholarship, focused on the major methods, figures, texts, and debates that define the field.

Effective: Fall 2016 Ending: Fall 2016

AF AM 139 (ENGL 139) (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglaa, Ellison, Morrison, and Wright.

Effective: Fall 2013

AF AM 145 (RL ST 145) (GH;US;IL)

African American Religions and Spirituality (3) History and significance of the religious dimension of the Black American struggle for equality from enslavement to the contemporary period.

Effective: Spring 2015

AF AM 146 (RL ST 146) (GH;US)

The Life and Thought of Martin Luther King, Jr. (3) A survey of the civil rights leader including his religious beliefs, intellectual development, and philosophy for social change.

Effective: Spring 2013

AF AM 147 (RL ST 147) (GH;US)

The Life and Thought of Malcolm X (3) The life of Malcolm X/El Hajj Malik El Shabazz (1925-1965) and his social, political, economic, and moral thought.

Effective: Fall 2013

AF AM 152 (HIST 152) (GH;US;IL)

African American History (3) African roots; colonial and revolutionary experiences; slavery and abolitionism; civil war and reconstruction; accommodation and protest; the new militancy.

Effective: Fall 2013

AF AM 210 (HIST 210) (GH;US)

Freedom's First Generation: African American Life and Work, 1865 to World War II (3) The course will explore the context and events that shaped African American life over the period 1896-1932.

Effective: Spring 2015

Prerequisite: AF AM 100 HIST 021

AF AM 211 (HIST 211) (GH;US;IL)

Slavery and Freedom in the Black Atlantic (3) The course will explore the history and role of African and African-descent people in Africa, the Americas, and Europe.

Effective: Spring 2015

Prerequisite: AF AM 100 or HIST 003 or HIST 020 or HIST 021 or HIST 152

AF AM 213Y (HIST 213Y, WMNST 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.
Effective: Spring 2015

AF AM 250 (HIST 250) (GH;IL)

Introduction to the Modern Caribbean (3) A survey course which, explores the historical evolution and emergence of the modern Caribbean.
Effective: Fall 2012

AF AM 280 (GH;US)

Historical Ethnography of Freedom (3) Studies the Underground Railroad movement to guide slaves to freedom, and public heritage surrounding this institution. Students use ethnographic approaches.
Effective: Summer 2014

AFR 150 (GH;IL)

Africa in Cinema (3) The study of the image of Africa as seen in fiction and non-fictional feature length films, ethnographic and documentary films.
Effective: Fall 2012

AFR 191 (HIST 191) (GH;IL)

Early African History (3) Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750.
Effective: Fall 2012

AFR 192 (HIST 192) (GH;IL)

Modern African History (3) Impact of the slave trade, expansion of Islam, colonial conquest, social and cultural transformations, resistance, nationalism, and independence.
Effective: Fall 2012

AG 160 (GH)

Introduction into Ethics and Issues in Agriculture (3) The course explores ethical theories, concepts of critical thinking, and major ethical issues related to American agriculture.
Effective: Summer 1999

AG 160S (GH)

Introduction to Ethics and Issues in Agriculture (3) Introduce students to the University and College of Ag Sciences preparing them to succeed. Review ethical theories and issues in American agriculture.
Effective: Summer 2012
Prerequisite: fifth- or second semester standing

AM ST 050 (GH)

The Literature and Lore of Mining (3) Experience and values of mining tradition: survey of the literature and lore, including field research.
Effective: Spring 2004

AM ST 083S (GH)

First-Year Seminar in American Studies (3) Critical approaches to the interdisciplinary study of American culture.
Effective: Summer 1999

AM ST 100 (GH;US)

Introduction to American Studies (3) A study of selected attempts to identify and interpret movements and patterns in American culture.
Effective: Spring 2006
Prerequisite: third-semester standing

AM ST 100Y (GH;US)

Introduction to American Studies (3) A study of selected attempts to identify and interpret movements and patterns in American culture.
Effective: Spring 2006
Prerequisite: third-semester standing

AM ST 103 (GH;US)

American Masculinities (3) Introduction to aspects of masculinities and manhood in America.
Effective: Summer 2008

AM ST 104 (WMNST 104) (GH;US)

Women and the American Experience (3) Selected aspects of the role of women in United States history and culture from colonial to modern times.
Effective: Summer 2005

AM ST 105 (ENGL 105) (GH;US)

American Popular Culture and Folklife (3) Survey of popular culture, folklife, and ethnicity, synthesizing material from such areas as literature, media, entertainment, print, music, and film.
Effective: Fall 2008

AM ST 134 (ENGL 134) (GH)

American Comedy (3) Studies in American comedy and satire, including such writers as Mark Twain, Faulkner, Vonnegut, Ellison, O'Connor, Welty, and Heller.
Effective: Fall 2016

AM ST 135 (ENGL 135) (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.
Effective: Fall 2013

AM ST 140Y (RL ST 140Y) (GH;US)

Religion in American Life and Thought (3) The function, contributions, tensions, and perspectives of religion in American culture.
Effective: Summer 2005

AM ST 160 (AAS 100) (GH;US)

Introduction to Asian American Studies (3) An introduction to the history, literature, and culture of Asian America.
Effective: Fall 2013

AM ST 196 (ENGL 196, AMSTD 196) (GH;US)

Introduction to American Folklore (3) A basic introduction to verbal and non-verbal folklore stressing the basic procedures of collection, classification, and analysis.
Effective: Summer 2005

ANTH 220 (GA;GH;IL)

Anthropology and Art/facts (3) This course examines anthropological approaches to the study of art works, their production, and function in diverse human societies, both past and present.
Effective: Summer 2012

APLNG 200 (GH;IL)

Introduction to Language, Culture, and Social Interaction (3) Introduction to the interrelationships among language, culture, and social interaction and their fundamental links to social identities and discourse communities.
Effective: Spring 2009

APLNG 210 (GH;IL)

The Ecology of Global English (3) This course explores how English language enables globalization processes and how globalization changes the structure, norms, and usage of English.
Effective: Spring 2009

ARAB 110 (GH;IL)

Arab Language, Cultures, and Current Topics (3) Fourth-semester Modern Standard Arabic: study of cultures through authentic discourse, texts, film; development of reading, writing, listening, speaking skills.
Effective: Summer 2010
Prerequisite: ARAB 003 or permission of program

ARAB 164 (RL ST 164) (GH;IL)

Muhammad and the Qur'an (3) History of the Qur'an and its interpretation by the early Muslim community; life of Muhammad and his role within Islam.
Effective: Fall 2015

ART H 225 (ENGL 225, WMNST 225) (GA;GH)

Sexuality and Modern Visual Culture (3) An examination of the visual expression of gender and sexual identities in English-speaking cultures since the late nineteenth century.
Effective: Summer 2009

ASIA 003 (RL ST 003) (GH;US;IL)

Introduction to the Religions of the East (3) Religious experience, thought, patterns of worship, morals, and institutions in relation to culture in Eastern religions.
Effective: Spring 2015

ASIA 004 (CMLIT 004) (GH;IL)

Introduction to Asian Literatures (3) Comparative interpretations of narrative, drama, lyric, and other writings from East Asia and other regions, viewed as world literature.
Effective: Fall 2010

ASIA 083S (GH;IL)

Asian Studies First Year Seminar (3) The meaning and advantages of a Liberal Arts education in context of a specific discipline.
Effective: Fall 2015

ASIA 100 (GH;IL)

What is Asia? (3) An introduction to the history, literatures, politics, and cultures of Asia.
Effective: Fall 2012

ASIA 103 (RL ST 103) (GH;US;IL)

Introduction to Hinduism (3) Historical development of Hinduism to the present.
Effective: Spring 2015

ASIA 104 (RL ST 104) (GH;US;IL)

Introduction to Buddhism (3) A general survey of the basic doctrine, practice, and historical development of Hinayana and Mahayana Buddhism.
Effective: Spring 2015

ASIA 120Y (GH;IL)

South Asia: A Literary History (3) The course traces the cultural history of South Asia by studying its literary tradition from ancient to modern times.
Effective: Summer 2014

ASIA 171 (HIST 171) (GH;IL)

Introduction to South Asian History 2: Early Modern to Contemporary (3) An introduction to South Asian history from early modern to contemporary times.

Effective: Spring 2015

ASIA 172 (HIST 172, JAPNS 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.

Effective: Fall 2016

ASIA 174 (HIST 174) (GH;IL)

The History of Traditional East Asia (3) Comparative cultural, institutional, and social history of traditional China and Japan to their contact with the industrialized West.

Effective: Fall 2016

ASIA 175 (HIST 175) (GH;IL)

The History of Modern East Asia (3) Survey of modern East Asian history and civilizations, from the nineteenth century to roughly the present day.

Effective: Fall 2016

ASIA 177 (HIST 177) (GH;IL)

The Rise of Modern Southeast Asia (3) Study of Southeast Asia from the rise of early empires to the present.

Effective: Summer 2014

ASIA 182 (HIST 182) (GH;IL)

Asian Trade: Economy, Industrialization and Capitalism in Asia (3) An historical overview of economy, industrialization, globalization and capitalism in Asia from the 16th century to present.

Effective: Summer 2014

ASIA 183 (HIST 183) (GH;IL)

Gender, Family, and Society in East Asia (3) Investigates the history of gender, family, love, and sex in East Asia.

Effective: Summer 2012

ASIA 184 (HIST 184) (GH;IL)

Society and Culture in the Pacific War (3) Examines the role of society and culture in the Pacific War's causes, contexts, realities, and aftermath.

Effective: Summer 2012

ASIA 185 (HIST 185) (GH;IL)

Asian Pop: The History of Popular Culture in Asia (3) A history of popular culture from the early modern period to the present.

Effective: Summer 2014

ASIA 188 (HIST 188) (GH;IL)

Tibet: People, Places and Spaces (3) This course examines the historical, cultural, and ethnic dimensions of Tibet from the seventh century to the present.

Effective: Summer 2012

ASIA 189 (HIST 189) (GH;IL)

Illicit Asia: An Alternative Introduction to Asia (3) A historical introduction to unlawful, illegitimate and forbidden ideas, goods, people and places in modern Asia.

Effective: Summer 2014

ASIA 200 (GH;IL)

What Are Asian Languages? (3) Introduction to the interrelated notions of language, interaction, and culture centering on regions and languages covered in Asian Studies.

Effective: Spring 2015

C I 280 (GH)

Introduction to Teaching English Language Learners (3) Introduction to language, culture, instruction, assessment, and professionalism as they relate to teaching English Language Learners in U.S. schools.

Effective: Fall 2015

Prerequisite: EDPSY 010 or EDPSY 014 or EDTHP 115

C LIT 113 (J ST 113, CAMS 113, RL ST 113) (GH;IL)

Myths and Legends of the Jews (3) Comparative study of diverse interpretations of stories from the Bible in Judaism and Christianity.

Effective: Summer 2015

CAMS 001 (GH)

Greek and Roman Literature (3) Selected readings within a chronological and thematic context of significant and influential masterworks of Greece and Rome.

Effective: Spring 2004

CAMS 004 (J ST 004, RL ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationships to culture.

Effective: Summer 2005

CAMS 005 (HIST 005) (GH;IL)

Ancient Mediterranean Civilizations (3) Survey of the history and cultures of ancient Mediterranean civilizations in Mesopotamia, Egypt, Syro-Levant, Anatolia, Greece, and Rome.
Effective: Spring 2008

CAMS 010 (GH;IL)

Mesopotamian Civilization (3) Cultural, technological, literary, political, and economic achievements of peoples who occupied the region of Mesopotamia (4,000-331 B.C.E.), in historical context.
Effective: Spring 2006

CAMS 012 (J ST 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.
Effective: Summer 2005

CAMS 015 (GH)

Wonders of the Ancient World (3) Overview of ancient world by focusing on the famed "Seven Wonders" and similar achievements from 3000 B.C.E.-1st Century C.E.
Effective: Spring 2003

CAMS 020 (GH)

Egyptian Civilization (3) The culture, history, literature, and archaeology of ancient Egypt from the dawn of history to the Greco-Roman period.
Effective: Fall 2005

CAMS 025 (GH;IL)

Greek Civilization (3) The origin and development of the ancient Greek people; their political and social institutions, public and private life.
Effective: Summer 2005

CAMS 033 (GH;IL)

Roman Civilization (3) Origin of the Romans; sociopolitical development; food, homes, education, marriage, family life, amusements, private and public worship.
Effective: Summer 2005

CAMS 044 (RL ST 044) (GH;IL)

Ancient Near Eastern and Egyptian Mythology (3) Survey of major ancient Mediterranean myths, gods, and goddesses in their cultural contexts; influence on later cultures.
Effective: Summer 2005

CAMS 045 (GH;IL)

Classical Mythology (3) Introduction to Greek and Roman divinities, heroes and heroines; survey of the major myths and their influence on Western culture.
Effective: Summer 2005

CAMS 050 (GH)

Words: Classical Sources of English Vocabulary (3) An introduction to English word forms stressing the most frequently occurring Latin and Greek elements and their derivatives.
Effective: Fall 2004

CAMS 070 (J ST 070, RL ST 070) (GH;IL)

Prophecy: The Near East Then and Now (3) Prophecy in the ancient Near East, the ancient Jewish and Christian traditions, and today.
Effective: Summer 2007

CAMS 083S (GH;IL)

First-Year Seminar in Classics and Ancient Mediterranean Studies (3) Critical approach to the study of ancient Mediterranean languages, literatures, and/or material cultures.
Effective: Summer 2005

CAMS 090 (J ST 090, RL ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from earliest times (c. 3000 BCE) to present.
Effective: Fall 2015

CAMS 100 (HIST 100) (GH;IL)

Ancient Greece (3) Greek world from the earliest Aegean cultures to the death of Alexander the Great and the beginnings of Hellenistic civilization.
Effective: Spring 2006

CAMS 101 (HIST 101) (GH;IL)

The Roman Republic and Empire (3) History of the Roman Republic and Empire from the origins of Rome to the disintegration of the Empire.
Effective: Spring 2006

CAMS 102 (HIST 102, J ST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.
Effective: Summer 2005

CAMS 104 (HIST 104) (GH)

Ancient Egypt (3) The history and archaeology of ancient Egypt from the dawn of history to the Greco-Roman period.

Effective: Summer 2002

CAMS 105 (GH;IL)

History of the Ancient Near East (3) History of the Ancient Near East from the end of the Neolithic to the Hellenistic period.

Effective: Summer 2005

CAMS 109Y (GH;IL)

Writing Systems of the World (3) Writing intensive overview of the world's writing systems throughout history.

Effective: Spring 2007

CAMS 110 (J ST 110, RL ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.

Effective: Summer 2005

CAMS 111 (J ST 111, RL ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.

Effective: Summer 2005

CAMS 113 (J ST 113, CMLIT 113, RL ST 113) (GH;IL)

Myths and Legends of the Jews (3) Comparative study of diverse interpretations of stories from the Bible in Judaism and Christianity.

Effective: Fall 2016

CAMS 115 (GH;IL)

Literature of the Ancient Near East (3) Reading and study of literary works from the Ancient Near East, especially from Mesopotamia and Ancient Egypt.

Effective: Fall 2016

CAMS 120 (J ST 120, RL ST 120) (GH)

New Testament (3) Introduction to the history, literature, and religion of early Christianity in the Jewish-Hellenistic setting.

Effective: Spring 2004

CAMS 121 (RL ST 121, J ST 112) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the context of first century Palestinian Judaism.

Effective: Fall 2015

CAMS 122 (J ST 122, RL ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

CAMS 123 (J ST 123, RL ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

CAMS 124 (J ST 124, RL ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.

Effective: Summer 2005

CAMS 134 (RL ST 134) (GH;IL)

Archaeology of Biblical Israel (3) Archaeology of Biblical Israel from 1200 B.C.E. to c. 640 C.E.; relationship between archaeological and textual evidence.

Effective: Fall 2015

CAMS 140 (GH;IL)

Classical Archaeology--Ancient Greece (3) Literary sources and material evidence for society; culture of the inhabitants of Greece in ancient times.

Effective: Summer 2005

CAMS 150 (GH;IL)

Classical Archaeology--Ancient Rome (3) Literary sources for the development of Roman civilization in relation to the relevant archaeological discoveries.

Effective: Summer 2005

CAMS 153 (J ST 153, RL ST 153) (GH;IL)

Dead Sea Scrolls (3) Examines the discovery, contents, and interpretations of the Dead Sea Scrolls, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

CAMS 160 (J ST 160, RL ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.

Effective: Summer 2014

CAMS 180 (HIST 180) (GH;IL)

Ancient Warfare (3) Historical survey of the evolution of warfare in the ancient Mediterranean region from prehistoric times to the Later Roman Empire.
Effective: Summer 2006

CAMS 200 (PHIL 200) (GH)

Ancient Philosophy (3) Examines the thought and influence of major Western thinkers from the pre-Socratics to the neo-Platonists, emphasizing Plato and Aristotle.
Effective: Fall 2003

CAMS 210 (J ST 210) (GH;IL)

Numismatics and the Historian (3) Numismatics--the scholarly study of coins and medals--is a major tool in the study of Classical history and archaeology.
Effective: Summer 2012

CAMS 250U (GH;IL)

Honors Classics in Literature and Film (3) This honors course explores the Classical Tradition as it thrives in the literature of later epochs and film.
Effective: Summer 2010

CAS 084S (GH)

First-Year Seminar in Communication Arts and Sciences (3) Introduction to significant issues surrounding effective human communication; humanities emphasis.
Effective: Summer 2002

CAS 175 (GH)

Persuasion and Propaganda (3) An introductory examination of how symbols have been used to create belief and action in revolutionary, totalitarian, and democratic settings.
Effective: Spring 2003

CAS 201 (GH)

Rhetorical Theory (3) History and theory of public advocacy and civic discourse.
Effective: Spring 2003

CAS 206 (GH)

Mediation and Communication (3) Presentation of the history, theory, and practice of mediation as a means of resolving conflict through communication.
Effective: Fall 2007

CAS 272 (GH)

Political Communication and Technology (3) This course examines how interactive communication technologies reshape political rhetoric, discursive civic culture, deliberation, and participatory democracy.
Effective: Spring 2014

CHEM 233 (ENGL 233) (GH;GN)

Chemistry and Literature (3) Exploration of key concepts of chemistry, the reciprocal influence of chemistry and literature throughout history, and the relationship of science to society, culture, and values.
Effective: Summer 2007

CHNS 120 (GH;IL)

Introduction to Chinese Literature and Culture (3) Chinese cultural productions, classical through contemporary; literature and film; changing cultural settings in multiple Chinese-speaking locations. Taught in English.
Effective: Spring 2010

CHNS 120W (GH)

Introduction to Chinese Literature and Culture (3) An introduction to Chinese histories and societies through literature and visual culture. Readings drawn from both classical and modern traditions, covering the period from the 11th century B.C. to the contemporary era.
Effective: Summer 2013

CHNS 121 (GH;IL)

Chinese Film and New Media (3) Survey of Chinese film and new media in the twentieth century and beyond, with attention to changing cultural settings. Taught in English.
Effective: Spring 2010

CMLIT 001 (GH;IL)

Introduction to Western Literatures Through the Renaissance (3) Introductory comparative survey of European and American literatures of Ancient through Renaissance periods, considering genre, themes, cultural and literary values.
Effective: Spring 2005

CMLIT 002 (GH;IL)

Introduction to Western Literatures Since the Renaissance (3) Introductory comparative survey of European and American literatures, post-Renaissance through Modern, considering genre, themes, cultural, and literary values.
Effective: Summer 2005

CMLIT 003 (GH;IL)

Introduction to African Literatures (3) Comparative analysis of drama, essay, novel, poetry, and stories from traditional oral forms to contemporary expressions of African literary styles.
Effective: Summer 2005

CMLIT 004 (ASIA 004) (GH;IL)

Introduction to Asian Literatures (3) Comparative interpretations of narrative, drama, lyric, and other writings from East

Asia and other regions, viewed as world literature.
Effective: Fall 2010

CMLIT 005 (GH;US;IL)

Introduction to Literatures of the Americas (3) Comparative interpretation of the oral and written literary traditions of North, Central, and South America.
Effective: Summer 2005

CMLIT 006 (PHIL 006) (GH;IL)

Philosophy and Literature in Western Culture (3) Explores fundamental issues of human existence through the traditions of western literature and philosophy.
Effective: Spring 2006

CMLIT 010 (GH;IL)

World Literatures (3) The development of literature around the world--from epic, legend, lyric, etc. in the oral tradition to modern written forms.
Effective: Fall 2015

CMLIT 011 (GH;IL)

The Hero in World Literature (3) The figure of the hero/heroine examined in world literature as a vehicle for expressing social and cultural values.
Effective: Summer 2005

CMLIT 012 (GH;IL)

Introduction to World Drama and Performance (3) The power, ethics, and excitement of drama and related forms of performance literature, presented in a global and comparative context.
Effective: Summer 2010

CMLIT 013 (GH;IL)

Virtual Worlds: Antiquity to the Present (3) Virtual worlds from ancient to postmodern, in a comparative and global context that includes literature, film, and online multiplayer games.
Effective: Summer 2010

CMLIT 083S (GH;IL)

First-Year Seminar in Comparative Literature (3) International topics in literature and culture; each seminar will have a specific topic as announced (see the Comparative Literature Web site).
Effective: Summer 2005

CMLIT 100 (GH;IL)

Reading Across Cultures (3) Comparative approaches (studying international literary periods, themes, genres, etc.) and principles of literary interpretation introduced through readings representing various cultures.
Effective: Fall 2010

CMLIT 101 (GH;US;IL)

Race, Gender, and Identity in World Literature (3) Identity and race, gender and heritage, centrality and marginality, self and other, as expressed in literary works from around the world.
Effective: Fall 2010

CMLIT 105 (GH;IL)

The Development of Literary Humor (3) Literary humor expressed as satire, comedy, and farce--from ancient times to the present--in an international and multicultural context.
Effective: Summer 2005

CMLIT 106 (GH;IL)

The Arthurian Legend (3) The growth and development of the legend of King Arthur, from medieval Europe to modern Japan.
Effective: Summer 2005

CMLIT 107 (GH;IL)

Exploration, Travel, Migration, and Exile (3) An international selection of journey narratives, from the real to the imaginary; travel narratives as critiques of self and society.
Effective: Spring 2011

CMLIT 108 (GH;IL)

Myths and Mythologies (3) World mythology: myths primarily of non-Western cultures, based on selected areas and traditions around the world.
Effective: Summer 2005

CMLIT 109 (GH;US;IL)

Native American Myths, Legends, and Literatures (3) Myths, legends, and literatures of Native American cultures.
Effective: Spring 2006

CMLIT 110 (J ST 131) (GH;US;IL)

Jewish Literature: An International Perspective (3) Literature of the Jewish tradition in various cultures and contexts, such as Europe, Israel, Islamic countries, and the Americas.
Effective: Spring 2011

CMLIT 111 (GH;IL)

Introduction to Literatures of India (3) Narrative, lyric, religious, oral, and dramatic literature, as well as film from India studied in translation from a global perspective.
Effective: Summer 2005

CMLIT 116 (J ST 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.
Effective: Summer 2015

CMLIT 120 (GH;IL)

The Literature of the Occult (3) Important literary works dealing with witchcraft, demonology, vampirism, ghosts, and related concepts, from biblical times to present.
Effective: Spring 2006

CMLIT 122 (GH;US;IL)

Global Science Fictions (3) A study of the relationships between science, literature, and film, from an international and interdisciplinary perspective.
Effective: Summer 2010

CMLIT 128 (ENGL 128, J ST 128, GER 128) (GH;US;IL)

The Holocaust in Film and Literature (3) Thematic, formal, and historical analysis of filmic and literary representation of the Holocaust.
Effective: Spring 2016

CMLIT 130 (GH;IL)

Banned Books: International and Comparative Perspectives (3) The world of banned books, their history, and their politics, studied comparatively and internationally.
Effective: Summer 2010

CMLIT 131 (GH;IL)

Crime and Detection in World Literature (3) Issues of ethics, truth, justice, and social order as embodied in crime and detective literature, presented in comparative contexts.
Effective: Summer 2010

CMLIT 132 (GH;IL)

Nobel Prize Literature (3) Introduction to Nobel Prize winning literature and the culture of the prize in international and historical context.
Effective: Summer 2010

CMLIT 140 (GH;IL)

Literature and the Other Arts: International and Comparative Perspectives (3) A comparative, international examination of the relationship between literature and non-literary art forms.
Effective: Summer 2010

CMLIT 141 (GH;US;IL)

Religion and Literature (3) Major religious themes as expressed in literary masterpieces; sacred texts from various cultures read as literature.
Effective: Summer 2005

CMLIT 142 (GH;IL)

The Psychology of World Literature (3) A comparative, psychological approach to world literature from the perspectives of writer, narrative, character, and reader.
Effective: Summer 2010

CMLIT 143 (GH;US;IL)

Human Rights and World Literature (3) Human rights violations discussed in tandem with their literary representation, presented in a global and comparative context.
Effective: Summer 2010

CMLIT 153 (GH;IL)

International Cultures: Film and Literature (3) Comparison of narrative techniques employed by literature and film in portraying different cultures, topics may vary each semester.
Effective: Spring 2011

CMLIT 184 (ENGL 184) (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the Nineteenth and Twentieth Century.
Effective: Spring 2006

CMLIT 185 (ENGL 185) (GH;IL)

World Novel (3) Development of the modern novel in the last century (outside the British Isles and the United States); lectures, discussions, readings in translation.
Effective: Spring 2011

CMLIT 189 (ENGL 189) (GH;IL)

Modern Drama (3) Playwrights who set the world's stage for twentieth-century drama; issues that continue to shape the contemporary theatrical world.
Effective: Spring 2011

CMLIT 190 (GH;IL)

Literary and Cultural Theory: An Introduction (3) A comparative introduction to literary and cultural theory, and its impact on the study of literature.
Effective: Summer 2010

CMLIT 191 (GAME 160) (GH;US;IL)

Introduction to Video Game Culture (3) A comparative, international look at the nature and history of video games as cultural artifacts, from Pong to online role-playing.
Effective: Spring 2015

CMLIT 415 (GH;US;IL)

World Graphic Novels (3) Critical analyses of form, genre, medium, and discourse of the graphic novel and its historical precedents in an international and comparative context.
Effective: Summer 2010
Prerequisite: 3 credits in literature

COMM 110 (GH)

Media and Democracy (3) This course considers the role of the mass media with regard to developing civic awareness and engagement in democratic societies.
Effective: Spring 2009

COMM 168 (GH)

American Journalism: Values, Traditions, and Practices (3) This course is designed to give students a broad overview of American journalism, its past, present and future; its traditions, principles and values.
Effective: Summer 2011

COMM 261 (GH)

The Literature of Journalism (3) Representative nonfiction by writers such as Susan Sheehan, George Orwell, Joan Didion, Alice Walker, Truman Capote, C. D. B. Bryan, Russell Baker.
Effective: Spring 2001

COMM 292 (GH)

Introduction to Media & Politics (3) This course explores the intersection of media and politics, introducing students to the critical analysis of mediated political discourse.
Effective: Spring 2008

CRIMJ 159 (HIST 159) (GH;US)

History of the FBI (3) Survey of the FBI's history with special emphasis on civil rights and liberties and bureaucratic development.
Effective: Spring 2014

DANCE 411 (GH)

From Africa to Hip Hop- The Evolution of African American Dance History (3) From Africa to Hip Hop- Evolution of African-American Dance History will explore the history of African related dance from its beginnings in West Africa through the contemporary expressions of Hip Hop.
Effective: Spring 2015
Prerequisite: DANCE 261

DIGIT 100 (GH)

Introduction to Digital Humanities (3) DIGIT 100 students will study the ways computation is shaping literary, political, and historical discourses.
Effective: Spring 2016

ENGL 001 (GH)

Understanding Literature (3) Explores how major fiction, drama, and poetry, past and present, primarily English and American, clarify enduring human values and issues.
Effective: Spring 2003

ENGL 001W (GH)

Understanding Literature (3) Studies the various critical ways of reading, understanding, and writing about fiction, poetry, and drama.
Effective: Spring 1999

ENGL 002 (GH)

The Great Traditions in English Literature (3) Major works of fiction, drama, and poetry from the Middle Ages to the twentieth century expressing enduring issues and values.
Effective: Spring 2000

ENGL 003S (GH)

The Great Traditions in American Literature (3) Major works of fiction, drama, and poetry from the colonial to the modern periods expressing enduring issues and values.
Effective: Fall 2002

ENGL 083S (GH)

First-Year Seminar in English (3) Critical approaches to the dimensions and directions in English/American literature and rhetoric.
Effective: Summer 1999

ENGL 088 (GH)

Australian/New Zealand Cultural Perspectives (3) Australian and New Zealand cultural and social perspectives, with emphasis on the historical development of intellectual, aesthetic, and humanistic values.
Effective: Spring 2001

ENGL 103 (GH;US)

The Great Traditions in American Literature (3) Major works of fiction, drama, and poetry from the colonial to the modern periods expressing enduring issues and values.
Effective: Spring 2013

ENGL 104 (J ST 104) (GH)

The Bible as Literature (3) Study of the English Bible as a literary and cultural document.

Effective: Fall 2015

ENGL 105 (AM ST 105) (GH;US)

American Popular Culture and Folklife (3) Survey of popular culture, folklife, and ethnicity, synthesizing material from such areas as literature, media, entertainment, print, music, and film.

Effective: Fall 2008

ENGL 112 (GH;US)

Pennsylvania Literature (3) An introduction to the literature that has been written by Pennsylvania authors from the colonial era through the present day.

Effective: Summer 2014

ENGL 128 (CMLIT 128, J ST 128, GER 128) (GH;US;IL)

The Holocaust in Film and Literature (3) Thematic, formal, and historical analysis of filmic and literary representation of the Holocaust.

Effective: Spring 2016

ENGL 129 (GH)

Shakespeare (3) A selection of the major plays studied to determine the sources of their permanent appeal. Intended for non-majors.

Effective: Spring 2003

ENGL 129H (GH)

Shakespeare (3) A selection of the major plays studied to determine the sources of their permanent appeal. Intended for non-majors.

Effective: Summer 2012

ENGL 130 (GH)

Reading Popular Texts (3) Popular texts (printed, visual, and aural texts) and their social, political, and cultural significance in the contemporary world.

Effective: Fall 2007

Prerequisite: ENGL 015 or ENGL 030H

ENGL 132 (J ST 132) (GH;US)

Jewish American Literature (3) A historical and thematic survey of Jewish Literature of the United States.

Effective: Fall 2015

ENGL 133 (GH)

Modern American Literature to World War II (3) Cather, Eliot, Frost, Faulkner, Fitzgerald, Hemingway, Hurston, Wharton, Wright, and other writers representative of the years between the world wars.

Effective: Spring 2002

ENGL 134 (AM ST 134) (GH)

American Comedy (3) Studies in American comedy and satire, including such writers as Mark Twain, Faulkner, Vonnegut, Ellison, O'Connor, Welty, and Heller.

Effective: Fall 2016

ENGL 135 (AM ST 135) (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.

Effective: Fall 2013

ENGL 135S (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.

Effective: Summer 2005

ENGL 136 (GH)

The Graphic Novel (3) The graphic novel as a literary and visual form (produced primarily in English).

Effective: Summer 2010

ENGL 139 (AF AM 139) (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.

Effective: Fall 2013

ENGL 139S (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.

Effective: Fall 2006

ENGL 140 (GH)

Contemporary Literature (3) Writers such as Baldwin, Beckett, Bellow, Ellison, Gordimer, Lessing, Lowell, Mailer, Naipaul, Pinter, Plath, Pynchon, Rushdie, and Walker.

Effective: Spring 2003

ENGL 145 (GH;IL)

Modern Irish Literature (3) Irish literature in the twentieth century and beyond; focus on the interplay of political, social,

and cultural, forces on literature.
Effective: Spring 2007

ENGL 179 (GH;US)

Exploring the Literature of Food: Current Trends in American Food Writing and Environmentalism (3) Examines historical and contemporary American food literature.
Effective: Spring 2015

ENGL 180 (GH)

Literature and the Natural World (3) Literary representations of the natural world, focusing on English language traditions.

Effective: Spring 2003

ENGL 181A (GH;US)

Adventure Literature: Exploring the Chesapeake Bay (4.5) Examines the interconnection of culture and nature in the Chesapeake Bay region through the literature of the region.
Effective: Summer 2011

ENGL 181B (GH;US)

Adventure Literature: Exploring Cape Cod (4.5) Examines the interconnection of culture and nature on Cape Cod through considerations of texts in various literary genres that have contributed to development of a distinctive regional identity and culture.

Effective: Summer 2011

ENGL 181C (GH;US)

The Beach: Exploring the Literature of the Atlantic Shore (4.5) Examines the interconnection of culture and nature in coastal areas of the Atlantic seaboard.

Effective: Spring 2012

ENGL 181D (GH;US)

Adventure Literature: Exploring the Literature of American Wilderness (3) Examines the history and cultural impact of wilderness in America.

Effective: Spring 2013

ENGL 182A (GH;US;IL)

Literature and Empire (3) Literature written in English from countries that were once part of European empires, e.g., India, Canada, South Africa, and others.

Effective: Summer 2005

ENGL 182C (GH;IL)

Literature and Empire (3) Literature written in English from countries that were once part of European empires, e.g., India, Canada, South Africa, and others.

Effective: Summer 2005

ENGL 184 (CMLIT 184) (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the nineteenth and twentieth centuries.

Effective: Spring 2006

ENGL 184S (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the nineteenth and twentieth centuries.

Effective: Spring 2006

ENGL 185 (CMLIT 185) (GH;IL)

World Novel (3) Development of the modern novel in the last century (outside the British Isles and the United States); lectures, discussions, readings in translation.

Effective: Spring 2011

ENGL 189 (CMLIT 189) (GH;IL)

Modern Drama (3) Playwrights who set the world's stage for twentieth-century drama; issues that continue to shape the contemporary theatrical world.

Effective: Spring 2011

ENGL 191 (GH)

Science Fiction (3) Science fiction as the literature of technological innovation and social change--its development, themes, and problems.

Effective: Summer 1995

ENGL 192 (GH)

The Literature of Fantasy (3) Literature(s) of fantasy from early forms through a variety of contemporary traditions.

Effective: Spring 2011

ENGL 194 (WMNST 194) (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by English, American, and other English-speaking women writers.

Effective: Summer 2005

ENGL 194S (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by English, American, and other English-speaking women writers.

Effective: Summer 2005

ENGL 196 (AM ST 196, AMSTD 196) (GH;US)

Introduction to American Folklore (3) A basic introduction to verbal and nonverbal folklore stressing the basic procedures of collection, classification, and analysis.

Effective: Summer 2005

ENGL 201 (GH)

What is Literature (3) Acquaints students with theory and practice relevant to studies of narrative, lyric poetry, and drama.

Effective: Summer 2006

Prerequisite: ENGL 015 or ENGL 030

ENGL 201H (GH)

What is Literature (3) Acquaints students with theory and practice relevant to studies of narrative, lyric poetry, and drama.

Effective: Summer 2012

Prerequisite: ENGL 015 or ENGL 030

ENGL 221 (GH)

British Literature to 1798 (3) Introduction to literary history and analysis; Beowulf and writers such as Chaucer, Shakespeare, Donne, Milton, Swift, Pope, and Fielding.

Effective: Spring 2016

Prerequisite: ENGL 015 ; ENGL 030 ; ENGL 137H ; or ENGL 138T

ENGL 222 (GH)

British Literature from 1798 (3) Introduction to literary history and analysis; writers such as Austen, Wordsworth, Keats, Browning, Dickens, The Brontes, Yeats, Joyce, and Woolf.

Effective: Spring 2016

Prerequisite: ENGL 015 ; ENGL 030 ; ENGL 137H ; or ENGL 138T

ENGL 225 (ART H 225, WMNST 225) (GA;GH)

Sexuality and Modern Visual Culture (3) An examination of the visual expression of gender and sexual identities in English-speaking cultures since the late nineteenth century.

Effective: Summer 2009

ENGL 226 (LTNST 226) (GH;US;IL)

Latina and Latino Border Theories (3) English 226 will constitute a wide-ranging examination of contemporary texts (1960-present) central to the construction of contemporary Latino/a culture.

Effective: Spring 2007

ENGL 227 (WMNST 227) (GH;US;IL)

Introduction to Culture and Sexuality (3) A course addressing the relationships between sexuality, literature, and culture.

Effective: Spring 2013

Prerequisite: ENGL 015 or ENGL 030

ENGL 228 (GH;IL)

Introduction to Disability Studies in the Humanities (3) Provides a humanities-based interdisciplinary introduction to Disability Studies.

Effective: Spring 2013

ENGL 231 (GH)

American Literature to 1865 (3) Introduction to literary history and analysis; writers such as Bradstreet, Franklin, Emerson, Hawthorne, Douglass, Thoreau, Fuller, Melville, Whitman, and Dickinson.

Effective: Spring 2016

Prerequisite: ENGL 015 ; ENGL 030 ; ENGL 137H ; or ENGL 138T

ENGL 232 (GH)

American Literature from 1865 (3) Introduction to literary history and analysis; writers such as Mark Twain, James, Cather, Frost, O'Neill, Faulkner, Hemingway, Hughes, and Morrison.

Effective: Spring 2016

Prerequisite: ENGL 015 ; ENGL 030 ; ENGL 137H ; or ENGL 138T

ENGL 233 (CHEM 233) (GH;GN)

Chemistry and Literature (3) Exploration of key concepts of chemistry, the reciprocal influence of chemistry and literature through history, and the relationship of science to society, culture, and values.

Effective: Spring 2006

ENGL 234 (GH)

Sports, Ethics, and Literature (3) Exploration of social and ethical issues in sports through a variety of literary texts.

Effective: Spring 2015

ENGL 245 (WMNST 245) (GH;US)

Introduction to Lesbian and Gay Studies (3) An introduction to the study of homosexual identities across a wide range of disciplines and methodologies.

Effective: Spring 2013

ENGL 262 (GH)

Reading Fiction (3) Elements of fiction including plot, character, viewpoint, and fictional genres in British, American, and other English-language traditions.

Effective: Spring 2003

Prerequisite: ENGL 015 or ENGL 030

ENGL 263 (GH)

Reading Poetry (3) Elements of poetry including meter, rhyme, image, diction, and poetic forms in British, American, and other English-language traditions.

Effective: Spring 2003

Prerequisite: ENGL 015 or ENGL 030

ENGL 265 (GH)

Reading Nonfiction (3) Forms of nonfictional prose such as autobiography, biography, essay, letter, memoir, oration, travelogue in British, American, and other English-language traditions.

Effective: Spring 2003

Prerequisite: ENGL 015 or ENGL 030

ENGL 268 (GH)

Reading Drama (3) Elements of drama including plot, character, dialogue, staging, and dramatic forms in British, American, and other English-language traditions.

Effective: Spring 2003

Prerequisite: ENGL 015 or ENGL 030

ENGR 201 (GH)

Structures and Society (3) Historical study of structures in the contexts of cultural, artistic, societal, and technological considerations; brief introduction to the scientific principles underlying their design.

Effective: Spring 2013

FD SC 280H (PHIL 280H) (GH)

Food, Values, and Health (3) The perceived relationship between food and health, emphasizing the conceptual nature of both; and how values contribute to the relationship.

Effective: Spring 2007

FR 083S (GH;IL)

First-Year Seminar in French (3) Critical approaches to the dimensions and directions in French/Francophone literatures and cultures.

Effective: Summer 2005

FR 137 (GH;IL)

Paris: Anatomy of a City (3) Survey of the cultural, artistic, literary, and social life of the city of Paris from Gallo-Roman times to the present.

Effective: Summer 2005

FR 138 (GH)

French Culture Through Film (3) Introduction to French culture through film by French and francophone directors examining gender, ethnicity, and global issues. Taught in English.

Effective: Spring 2002

FR 139 (GH;IL)

France and the French-speaking World (3) An introduction to the culture of France and its impact on the world.

Effective: Summer 2005

FR 142 (GH;IL)

French Fiction, Drama, and Film (In English) (3) An introduction, in English, to French and francophone literature and cultural history through film, theater, and literature.

Effective: Spring 2016

GAME 160 (CMLIT 191) (GH;US;IL)

Introduction to Video Game Culture (3) A comparative, international look at the nature and history of video games as cultural artifacts, from Pong to online role-playing.

Effective: Spring 2015

GEOG 122 (GH;US)

The American Scene (3) Historical perspectives on the social and cultural forces associated with the production of distinctive American landscapes.

Effective: Spring 2007

GER 083S (GH;US;IL)

First-Year Seminar in German (3) Germany's cultural past and present.

Effective: Summer 2005

GER 100 (GH;IL)

German Culture and Civilization (3) Culture and civilization of the German people from the Germanic migrations to the Nazi period. Conducted in English.

Effective: Summer 2005

GER 128 (CMLIT 128, ENGL 128, J ST 128) (GH;US;IL)

The Holocaust in Film and Literature (3) Thematic, formal, and historical analysis of filmic and literary representation of the Holocaust.

Effective: Spring 2016

GER 143 (RUS 143) (GH;IL)

The Culture of Stalinism and Nazism (3) The culture of Stalinist Russia and Nazi Germany in comparative perspective.

Effective: Summer 2005

GER 157 (GH;US)

Pennsylvania Germans: The Culture of the Sectarians (3) Survey of the religious background, beliefs, social life, customs, education, and culture of the Pennsylvania German sectarians, especially the Amish. Conducted in English.

Effective: Summer 2005

GER 175 (GH;IL)

Germanic Heroic and Medieval Literature in English Translation (3) Germanic heroic and medieval courtly literature from 800 to 1350 focusing on the prevailing cultural, social, and legal conditions.

Effective: Spring 2006

GER 189 (GH;IL)

German Film (3) A survey of German film from its beginnings to the present, with emphasis on historical, political, and cultural contexts.

Effective: Summer 2014

GER 190 (GH;IL)

Twentieth-Century German Literature in English Translation (3) Works of such writers as Boll, Brecht, Durrenmatt, Frisch, Grass, Hesse, Kafka, Mann, Rilke, Weiss, and Wolf.

Effective: Spring 2006

GER 195 (GH;IL)

Modern German Drama and Theatre in English Translation (3) Plays and their stage realization by writers such as Brecht, Durrenmatt, Handke, Hauptmann, Kaiser, Schnitzler, Wedekind, and Weiss.

Effective: Spring 2006

GER 200 (GH;IL)

Contemporary German Culture (3) Germany since WWI, its politics, economics, society, arts, and educational system in the international context; conducted in English.

Effective: Summer 2005

GER 245 (GH)

The Vikings (3) Focus on the history of the Vikings from 800 to 1400 as conveyed to us in mythology, literature, and archaeology. Conducted in English.

Effective: Spring 2005

GLIS 102 (GH;IL)

Global Pathways (3) Five pathways to thinking globally: Health & Environment, Culture & Identity, Human Rights, Wealth & Inequality, and Global Conflict.

Effective: Summer 2015

HEBR 010 (J ST 010) (GH;IL)

Jewish Civilization (3) Life of the Jewish people from Biblical times, emphasizing cultural, religious, and institutional developments.

Effective: Summer 2005

HIST 001 (GH;IL)

The Western Heritage I (3) A survey of the Western heritage from the ancient Mediterranean world to the dawn of modern Europe.

Effective: Spring 2006

HIST 001T (GH;IL)

The Western Heritage I (3) A survey of the Western heritage from the ancient Mediterranean world to the dawn of modern Europe.

Effective: Spring 2006

HIST 002 (GH;IL)

The Western Heritage II (3) A survey of the Western heritage from the dawn of modern Europe in the seventeenth century to the present.

Effective: Spring 2006

HIST 003 (GH;US)

The American Nation: Historical Perspectives (3) American history from discovery to the present, focusing on both racial, ethnic, and religious differences and shared traditions and ideals.

Effective: Fall 2014

HIST 005 (CAMS 005) (GH;IL)

Ancient Mediterranean Civilizations (3) Survey of the history and cultures of ancient Mediterranean civilizations in Mesopotamia, Egypt, Syro-Levant, Anatolia, Greece, and Rome.

Effective: Spring 2008

HIST 010 (GH;IL)

World History I (3) Human origins; early civilizations; major political and intellectual developments on all continents; cultural interrelationships to 1500.

Effective: Summer 2005

HIST 011 (GH;IL)

World History II (3) Social, economic, and political evolution of societies and cultures from 1500 to the present.

Effective: Summer 2005

HIST 012 (GH;US)

History of Pennsylvania (3) Chronological and topical survey, emphasizing immigration of diverse ethnic groups and religious, political, economic, and social developments, including industrialization and urbanization.

Effective: Spring 2006

HIST 020 (GH;US)

American Civilization to 1877 (3) An historical survey of the American experience from its colonial beginnings through the Civil War and Reconstruction.

Effective: Spring 2006

HIST 020Y (GH;US)

American Civilization to 1877 (3) An historical survey of the American experience from its colonial beginnings through the Civil War and Reconstruction.

Effective: Spring 2006

HIST 021 (GH;US)

American Civilization Since 1877 (3) An historical survey of the American experience from the emergence of urban-industrial society in the late nineteenth century to the present.

Effective: Spring 2006

HIST 021Y (GH;US)

American Civilization Since 1877 (3) An historical survey of the American experience from the emergence of urban-industrial society in the late nineteenth century to the present.

Effective: Spring 2006

HIST 066 (GH;IL)

Survey of British History (3) The British Isles and their peoples since the ancient period, emphasizing political, cultural, and intellectual developments and imperial rise and fall.

Effective: Summer 2012

HIST 083S (GH)

First-Year Seminar in History (3) Critical approaches to the dimensions and directions in History.

Effective: Summer 1999

HIST 100 (CAMS 100) (GH;IL)

Ancient Greece (3) Greek world from the earliest Aegean cultures to the death of Alexander the Great and the beginnings of Hellenistic civilization.

Effective: Spring 2006

HIST 101 (CAMS 101) (GH;IL)

The Roman Republic and Empire (3) History of the Roman Republic and Empire from the origins of Rome to the disintegration of the Empire.

Effective: Spring 2006

HIST 102 (CAMS 102, J ST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

HIST 103 (GH;IL)

The History of Madness, Mental Illness, and Psychiatry (3) This course will examine the ideas that have shaped European and American perceptions of madness, insanity, and mental illness.

Effective: Summer 2005

HIST 104 (CAMS 104) (GH)

Ancient Egypt (3) The history and archaeology of ancient Egypt from the dawn of history to the Greco-Roman period.

Effective: Summer 2002

HIST 105 (GH;IL)

The Byzantine Empire (3) Development of Byzantine civilization from the decline of the Roman Empire to the fall of Constantinople.

Effective: Spring 2006

HIST 107 (MEDVL 107) (GH;IL)

Medieval Europe (3) Rise and development of the civilization of medieval Europe from the decline of Rome to 1500.

Effective: Spring 2006

HIST 108 (GH;IL)

The Crusades: Holy War in the Middle Ages (3) The social and political history of medieval religious warfare in Europe and in the Middle East.

Effective: Spring 2006

HIST 109 (GH;US)

Introduction to U.S. Environmental History (3) An introduction to the changing relationships between human beings and the natural world in American history.

Effective: Fall 2016

HIST 110 (GH;IL)

Nature and History (3) A broad introduction to the history of human relationships with nature throughout the world.

Effective: Summer 2005

HIST 111 (NUTR 111) (GH;US)

American Food System: History, Technology, and Culture (3) A cultural analysis of the evolution of U.S. agricultural production and food consumption patterns, the food industry and food marketing.

Effective: Fall 2013

HIST 115 (J ST 115, RL ST 115) (GH;US)

The American Jewish Experience (3) Examination of the history, culture, social tensions, and contributions of Jews and Judaism in America.

Effective: Fall 2015

HIST 117 (WMNST 117) (GH;US;IL)

Women in Modern History (3) Modernization and women: changing images and roles since mid-eighteenth century in the family, workshop, politics, society; cross-cultural comparisons.

Effective: Summer 2005

HIST 119 (GH;IL)

Gender and History (3) Survey of the development of gender roles in Western societies from the prehistoric era to the early modern period.

Effective: Spring 2008

HIST 121 (J ST 121) (GH;IL)

History of the Holocaust 1933-1945 (3) Historical analysis of holocaust themes.

Effective: Summer 2005

HIST 122 (GH)

History of Science I (3) A history of science and culture from pre-history until the Scientific Revolution.

Effective: Fall 2014

HIST 123 (GH)

History of Science II (3) A history of science and culture from the scientific revolution to the present.

Effective: Fall 2014

HIST 124 (S T S 124) (GH;US;IL)

History of Western Medicine (3) This course explores the history of health, illness, and medicine in western society.

Effective: Summer 2008

HIST 130 (GH;US)

Introduction to the Civil War Era, 1848 through 1877 (3) Survey of causes and consequences of American Civil War, end of Mexican War in 1848 through end of Reconstruction, 1877.

Effective: Spring 2010

HIST 134 (GH;IL)

Introduction to the British Isles, 1400-1800 (3) Survey of the history and cultures of the British Isles from 1400 to 1800.

Effective: Spring 2010

HIST 140 (J ST 140) (GH;IL)

The Israel-Palestine Conflict (3) Roots of the Israel-Palestine conflict; relations between Arabs and Jews in the Middle East from 19th century to present.

Effective: Fall 2016

HIST 141 (GH;IL)

Medieval and Modern Russia (3) Introductory survey, including political, social, economic, and cultural development of Kievan, Muscovite, and Imperial Russia.

Effective: Spring 2006

HIST 143 (J ST 143) (GH;IL)

History of Fascism and Nazism (3) The study of right-wing totalitarianism in the twentieth century, with special emphasis on Fascist Italy and Nazi Germany.

Effective: Fall 2015

HIST 144 (GH;US;IL)

The World at War: 1939-1945 (3) In-depth study of the origins and conduct of World War II. Political and economic aspects as well as military.

Effective: Spring 2006

HIST 150 (GH;US)

America in the 1960s: An Introduction (3) An introduction to the history of the United States in the 1960s.

Effective: Summer 2015

HIST 152 (AF AM 152) (GH;US;IL)

African American History (3) African roots; colonial and revolutionary experiences; slavery and abolitionism; civil war and reconstruction; accommodation and protest; the new militancy.

Effective: Fall 2013

HIST 153 (GH;US)

The Indian in North America (3) A survey of the American Indian from prehistory to the present.

Effective: Summer 2005

HIST 153Y (GH;US)

The Indian in North America (3) A survey of the American Indian from prehistory to the present.

Effective: Summer 2005

HIST 154 (GH;US)

History of Welfare and Poverty in the United States (3) History of care of the impoverished (emphasis on gender, race, nationality, age of poor, and welfare givers), 18th century to present.

Effective: Summer 2005

HIST 155 (GH;US)

American Business History (3) Major developments in the history of business and industry from the colonial period to the present.

Effective: Spring 2006

HIST 159 (CRIMJ 159) (GH;US)

History of the FBI (3) Survey of the FBI's history with special emphasis on civil rights and liberties and bureaucratic development.

Effective: Spring 2014

HIST 166 (WMNST 166) (GH;US)

History of Sexuality (3) Discusses the ideas, practices, and identities surrounding sexuality over several centuries in a variety of contexts, focusing primarily on the US.

Effective: Summer 2012

Prerequisite: one introductory level course in History or Women's Studies

HIST 171 (ASIA 171) (GH;IL)

Introduction to South Asian History 2: Early Modern to Contemporary (3) An introduction to South Asian history from early modern to contemporary times.

Effective: Spring 2015

HIST 172 (ASIA 172, JAPNS 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.

Effective: Fall 2016

HIST 173 (GH;IL)

Vietnam in War and Peace (3) Rise of nationalism and communism; origins of conflict; United States involvement; impact on postwar regional and international politics; contemporary Vietnam.

Effective: Spring 2006

HIST 174 (ASIA 174) (GH;IL)

The History of Traditional East Asia (3) Comparative cultural, institutional, and social history of traditional China and Japan to their contact with the industrialized West.

Effective: Fall 2016

HIST 175 (ASIA 175) (GH;IL)

The History of Modern East Asia (3) Survey of modern East Asian history and civilizations, from the nineteenth century to roughly the present day.

Effective: Fall 2016

HIST 176 (GH;IL)

Survey of Indian History (3) Survey of cultural, institutional, and political history from ancient times to the present.

Effective: Summer 2005

HIST 177 (ASIA 177) (GH;IL)

The Rise of Modern Southeast Asia (3) Study of Southeast Asia from the rise of early empires to the present.

Effective: Summer 2014

HIST 178 (GH;IL)

Latin-American History to 1820 (3) Conquest of the New World, development of colonial institutions, impact on native cultures, and origins of independence movements.

Effective: Summer 2005

HIST 179 (GH;IL)

Latin-American History Since 1820 (3) Origin, political growth, international relations, and economic status of the Latin-American republics, with emphasis upon present-day conditions.

Effective: Summer 2005

HIST 180 (CAMS 180) (GH;IL)

Ancient Warfare (3) Historical survey of the evolution of warfare in the ancient Mediterranean region from prehistoric times to the Later Roman Empire.

Effective: Summer 2006

HIST 181 (J ST 181) (GH;IL)

Introduction to the Middle East (3) Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918.

Effective: Fall 2015

HIST 182 (ASIA 182) (GH;IL)

Asian Trade: Economy, Industrialization and Capitalism in Asia (3) An historical overview of economy, industrialization, globalization and capitalism in Asia from the 16th century to present.

Effective: Summer 2014

HIST 183 (ASIA 183) (GH;IL)

Gender, Family, and Society in East Asia (3) Investigates the history of gender, family, love, and sex in East Asia.
Effective: Summer 2012

HIST 184 (ASIA 184) (GH;IL)

Society and Culture in the Pacific War (3) Examines the role of society and culture in the Pacific War's causes, contexts, realities, and aftermath.
Effective: Summer 2012

HIST 185 (ASIA 185) (GH;IL)

Asian Pop: The History of Popular Culture in Asia (3) A history of popular culture from the early modern period to the present.
Effective: Summer 2014

HIST 188 (ASIA 188) (GH;IL)

Tibet: People, Places and Space (3) This course examines the historical, cultural, and ethnic dimensions of Tibet from the seventh century to the present.
Effective: Summer 2012

HIST 189 (ASIA 189) (GH;IL)

Illicit Asia: An Alternative Introduction to Asia (3) A historical introduction to unlawful, illegitimate and forbidden ideas, goods people and places in modern Asia.
Effective: Summer 2014

HIST 190 (J ST 190, RL ST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.
Effective: Summer 2015

HIST 191 (AFR 191) (GH;IL)

Early African History (3) Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750.
Effective: Fall 2012

HIST 192 (AFR 192) (GH;IL)

Modern African History (3) Impact of the slave trade, expansion of Islam, colonial conquest, social and cultural transformations, resistance, nationalism, and independence.
Effective: Fall 2012

HIST 203Y (GH;US;IL)

History of Monsters, Aliens & The Supernatural (3) This course explores the history of the preoccupation with monsters, aliens, and the supernatural.
Effective: Summer 2015

HIST 205 (J ST 205) (GH;US)

American Antisemitism (3) The Phenomenon of antisemitism in American history from Peter Stuyvesant to the present.
Effective: Summer 2011

HIST 210 (AF AM 210) (GH;US)

Freedom's First Generation: African American Life and Work, 1865 to World War II (3) The course will explore the context and events that shaped African American life over the period 1896-1932.
Effective: Spring 2015
Prerequisite: AF AM 100 three credits of American history or permission of the instructor

HIST 211 (AF AM 211) (GH;US;IL)

Slavery and Freedom in the Black Atlantic (3) The course will explore the history and role of African and African-descent people in Africa, the Americas, and Europe.
Effective: Spring 2015
Prerequisite: AF AM 100 or HIST 003 or HIST 020 or HIST 021 or HIST 152

HIST 213Y (AF AM 213Y, WMNST 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.
Effective: Spring 2015

HIST 220 (J ST 220) (GH;IL)

Global Diaspora and Exile (3) Introduction to and survey of the Jewish and other Diasporas around the world.
Effective: Fall 2015

HIST 250 (AF AM 250) (GH;IL)

Introduction to the Modern Caribbean (3) A survey course which explores the historical evolution and emergence of the modern Caribbean.
Effective: Fall 2012

HIST 261Y (J ST 261Y) (GH;US;IL)

Ghetto: From Venice to Detroit (3) This course explores why certain groups have been segregated in cities around the world in the last 500 years.
Effective: Spring 2015

HIST 266Y (WMNST 266Y) (GH;US)

Sex and Violence in Nineteenth-Century America (3) Historical Overview of Sex and Violence in the Nineteenth-Century United States.

Effective: Spring 2015

HIST 422 (RL ST 422) (GH;IL)

Religion and American Culture (3 per semester/maximum of 6) Selected topics, problems, or historical movements in American religion. Relation between religion and American culture.

Effective: Spring 2015

Prerequisite: 3 credits in either history or religious studies

HIST 423 (RL ST 423) (GH;IL)

Orthodox Christianity: History and Interpretations (3) Examines Orthodox Christianity from origins to present using critical historical analysis of primary and secondary sources.

Effective: Spring 2015

Prerequisite: HIST 105

HUM 100 (GH)

Foundations in the Humanities: Understanding the Human Experience (3) Introductory, interdisciplinary study of significant works in the humanities, stressing basic interpretive skills.

Effective: Spring 2015

HUM 150 (GH;IL)

World Mythologies in the Arts (3) Interdisciplinary, cross cultural, historical, and contemporary study of world mythologies as represented in the visual arts, literature, and film.

Effective: Fall 2015

HUM 200 (GH)

Explorations in the Humanities: The Quest (3) Interdisciplinary study of significant works in the humanities within the broad theme of the quest, stressing students' interpretive skills.

Effective: Spring 2015

Prerequisite: HUM 100

HUM 311 (GH;IL)

The Western Tradition I (3) From prehistory through the Roman world.

Effective: Fall 2015

Prerequisite: fifth-semester standing

IT 083S (GH;IL)

First-Year Seminar in Italian Literature, Film, and Culture (3) Introduction to the study of Italian literature, film, and culture.

Effective: Summer 2005

IT 130 (GH;IL)

Italian Culture and Civilization (3) Italian life from antiquity to the present; literature, film, the arts, and contemporary problems in historical perspective.

Effective: Summer 2005

IT 131 (GH;US)

Italian American Culture and Civilization (3) Italian-American experience from the late 19th century to present. Socio-political issues seen through cinema and through literary and other readings.

Effective: Summer 2005

IT 230 (GH)

Masterpieces of Italian Literature in English Translation (3) Emphasis on works and authors of international importance. Lectures, readings, and written work in English.

Effective: Summer 1995

J ST 004 (CAMS 004, RL ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationship to culture.

Effective: Summer 2005

J ST 010 (HEBR 010) (GH;IL)

Jewish Civilization (3) Life of the Jewish people from biblical times; emphasizing cultural, religious, and institutional developments.

Effective: Summer 2005

J ST 012 (CAMS 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

J ST 070 (CAMS 070, RL ST 070) (GH;IL)

Prophecy: The Near East Then and Now (3) Prophecy in the ancient Near East, the ancient Jewish and Christian traditions, and today.

Effective: Summer 2007

J ST 083S (GH;IL)

First-Year Seminar in Jewish Studies (3) Critical approaches to the history, sociology, and literature of Jewish Studies.

Effective: Summer 2005

J ST 090 (CAMS 090, RL ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from

earliest times (c. 3000 BCE) to present.
Effective: Fall 2015

J ST 102 (CAMS 102, HIST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.
Effective: Summer 2005

J ST 104 (ENGL 104) (GH)

The Bible as Literature (3) Study of the English Bible as a literary and cultural document.
Effective: Fall 2015

J ST 106 (RL ST 106) (GH;IL)

Mysticism and Kabbalah (3) A survey of the history, philosophy, and cultural impact of various mystical traditions in relation to world religions.
Effective: Fall 2015

J ST 110 (CAMS 110, RL ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.
Effective: Summer 2005

J ST 111 (CAMS 111, RL ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.
Effective: Summer 2005

J ST 112 (CAMS 121, RL ST 121) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the context of first century Palestinian Judaism.
Effective: Fall 2015

J ST 113 (CMLIT 113, CAMS 113, RL ST 113) (GH;IL)

Myths and Legends of the Jews (3) Comparative study of diverse interpretations of stories from the Bible in Judaism and Christianity.
Effective: Fall 2016

J ST 114 (RL ST 114) (GH;US;IL)

Modern Judaism (3) Trends in Jewish life and thought since the French revolution; Judaism's responses to the challenge of modernity.
Effective: Summer 2005

J ST 115 (HIST 115, RL ST 115) (GH;US)

The American Jewish Experience (3) Examination of the history, culture, social tensions, and contributions of Jews and Judaism in America.
Effective: Fall 2015

J ST 116 (CMLIT 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.
Effective: Summer 2015

J ST 120 (CAMS 120, RL ST 120) (GH)

New Testament (3) Introduction to the history, literature, and religion of early Christianity in the Jewish-Hellenistic setting.
Effective: Spring 2004

J ST 121 (HIST 121) (GH;IL)

History of the Holocaust 1933-1945 (3) Historical analysis of holocaust themes.
Effective: Summer 2005

J ST 122 (CAMS 122, RL ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.
Effective: Summer 2014

J ST 123 (CAMS 123, RL ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of the ancient Near East: Judaism, Christianity, and Islam.
Effective: Summer 2014

J ST 124 (CAMS 124, RL ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.
Effective: Summer 2005

J ST 128 (CMLIT 128, ENGL 128, GER 128) (GH;US;IL)

The Holocaust in Film and Literature (3) Thematic, formal, and historical analysis of filmic and literary representation of the Holocaust.
Effective: Spring 2016

J ST 131 (CMLIT 110) (GH;US;IL)

Jewish Literature: An International Perspective (3) Literature of the Jewish tradition in various cultures and contexts,

such as Europe, Israel, Islamic countries, and the Americas.
Effective: Spring 2011

J ST 132 (ENGL 132) (GH;US)

Jewish American Literature (3) A historical and thematic survey of Jewish Literature of the United States.
Effective: Fall 2015

J ST 135 (PHIL 135, RL ST 135) (GH;IL)

Ethics in Jewish Tradition and Thought (3) Examination of Jewish ethical thought from biblical foundations to the modern period, with attention to contemporary issues in moral philosophy.
Effective: Summer 2015

J ST 137 (RL ST 137, WMNST 137) (GH;US;IL)

Women and Religion (3) Jewish and Christian religious views on womanhood; thought and lives of important religious women; and feminist understandings of these.
Effective: Fall 2012
Prerequisite: third-semester standing

J ST 140 (HIST 140) (GH;IL)

The Israel-Palestine Conflict (3) Roots of the Israel-Palestine conflict; relations between Arabs and Jews in the Middle East from 19th century to present.
Effective: Fall 2016

J ST 143 (HIST 143) (GH;IL)

History of Fascism and Nazism (3) The study of right-wing totalitarianism in the twentieth century, with special emphasis on Fascist Italy and Nazi Germany.
Effective: Fall 2015

J ST 153 (CAMS 153, RL ST 153) (GH;IL)

Dead Sea Scroll (3) Examines the discovery, contents, and interpretations of the Dead Sea Scroll, Jewish texts from approximately 225 B.C.E. to 68 C.E.
Effective: Summer 2014

J ST 160 (CAMS 160, RL ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.
Effective: Summer 2014

J ST 181 (HIST 181) (GH;IL)

Introduction to the Middle East (3) Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918.
Effective: Fall 2015

J ST 190 (HIST 190, RL ST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.
Effective: Summer 2015

J ST 205 (HIST 205) (GH;US)

American Antisemitism (3) The Phenomenon of antisemitism in American history from Peter Stuyvesant to the present.
Effective: Summer 2011

J ST 210 (CAMS 210) (GH;IL)

Numismatics and the Historian (3) Numismatics--the scholarly study of coins and medals--is a major tool in the study of Classical history and archaeology.
Effective: Summer 2012

J ST 220 (HIST 220) (GH;IL)

Global Diaspora and Exile (3) Introduction to and survey of the Jewish and other Diasporas around the world.
Effective: Fall 2015

J ST 261Y (HIST 261Y) (GH;US;IL)

Ghetto: From Venice to Detroit (3) This course explores why certain groups have been segregated in cities around the world in the last 500 years.
Effective: Spring 2015

J ST 280 (WMNST 280, RL ST 280) (GH;IL)

Women and Judaism (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.
Effective: Fall 2006

JAPNS 120 (GH;IL)

Japanese Literature in Its Cultural Context (3) Japanese literature and film from classical through contemporary times, with attention to changing cultural settings. Taught in English.
Effective: Spring 2010

JAPNS 120W (GH;IL)

Japanese Literature in its Cultural Context (3) Japanese Literature in its Cultural Context: Japanese literature and Culture from Classical through contemporary times; writing intensive.
Effective: Summer 2013

JAPNS 121 (GH;IL)

Japanese Film and New Media (3) Survey of Japanese film and new media in the twentieth century and beyond, with attention to changing cultural settings. Taught in English.
Effective: Spring 2010

JAPNS 172 (ASIA 172, HIST 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.
Effective: Fall 2016

LING 102 (GH)

Introduction to Historical Linguistics (3) How languages change and evolve over time; language families; effects of borrowing and language contact.
Effective: Spring 2002
Prerequisite: LING 010 or LING 100

LTNST 100 (GH;US)

Introduction to Latina/s Studies (3) This course provides an interdisciplinary introduction to the study of Latinas/os in the U.S.
Effective: Fall 2012

LTNST 226 (ENGL 226) (GH;US;IL)

Latina and Latino Border Theories (3) English 226 will constitute a wide-ranging examination of contemporary texts (1960-present) central to the construction of contemporary Latino/a culture.
Effective: Fall 2012

LTNST 315 (SPAN 315) (GH;US)

Spanish and Spanish-speakers in the U.S. (3) In this course, we investigate various aspects of the language(s) and language behaviors of U.S. Latinos.
Effective: Fall 2012

LTNST 479 (LTNST 479) (GH;US)

U.S. Latina/o Culture en Espanol (3) The history, culture, art, and social issues of Latinos in the United States.
Effective: Summer 2014
Prerequisite: SPAN 253W

MEDVL 107 (HIST 107) (GH;IL)

Medieval Europe (3) Rise and development of the civilization of medieval Europe from the decline of Rome to 1500.
Effective: Spring 2006

MEDVL 108 (GH;IL)

Medieval Civilization (3) An interdisciplinary introduction to literature, art, and thought of the Middle Ages.
Effective: Spring 2006

NUTR 111 (HIST 111) (GH;US)

American Food System: History, Technology and Culture (3) A cultural analysis of the evolution of U.S. agricultural production and food consumption patterns, the food industry and food marketing.
Effective: Fall 2013

PHIL 001 (GH)

Basic Problems of Philosophy (3) Introduction to central philosophical themes, including the mind/body problem, the existence of God, ethical problems, the nature of reality. Students may take only one course for General Education credit from PHIL 001 GH or 004 GH.
Effective: Spring 2000

PHIL 002 (GH)

Philosophy, Politics, and Social Theory (3) Examines relations between political and social organizations, the justification and limits of the state, and issues concerning individuality and community.
Effective: Fall 2003

PHIL 003 (GH)

Persons, Moral Values and the Good Life (3) Major ethical positions and assumptions regarding questions of freedom, choice, obligation, and conflicts in contemporary moral conduct, values, and reasoning.
Effective: Fall 2004

PHIL 005 (GH)

Philosophy, Art, and Film (3) Explores relations between images and reality, representation and culture, and beauty and politics through film, artworks, and aesthetic theories.
Effective: Spring 2002

PHIL 006 (CMLIT 006) (GH;IL)

Philosophy and Literature in Western Culture (3) Explores fundamental issues of human existence through the traditions of western literature and philosophy.
Effective: Spring 2006

PHIL 007 (GH;IL)

Asian Philosophy (3) Introduction to philosophical, moral, and aesthetic teachings of Asian traditions such as Hinduism, Buddhism (including Zen), Taoism, Confucianism, and Shintoism.
Effective: Summer 2005

PHIL 008 (WMNST 008) (GH)

Philosophy and Feminism (3) Explores diverse feminist philosophies of culture and knowledge, and examines gender's

role in accounts of reality, truth, morality, and justice.

Effective: Spring 2006

PHIL 009 (GH;US)

Philosophy, Race, and Diversity (3) Critically examines the significance of race and cultural diversity for, and in, understandings of reality, knowledge, truth, morality, and justice.

Effective: Summer 2005

PHIL 010 (GH)

Critical Thinking (3) Discussion of the validity, soundness, and fallacies of everyday language use and reasoning; informal logic; and manipulative arguments and propaganda.

Effective: Fall 2003

PHIL 010S (GH)

Critical Thinking (3) Discussion of the validity, soundness, and fallacies of everyday language use and reasoning; informal logic; and manipulative arguments and propaganda.

Effective: Spring 2005

PHIL 011 (GH)

Philosophy, Science, and Truth (3) Examines the philosophical foundations of natural scientific inquiry, knowledge, objectivity, and the relation of scientific truth to common sense.

Effective: Fall 2003

PHIL 013 (GH)

Philosophy, Nature, and the Environment (3) Studies competing historical and contemporary conceptions of nature, their philosophical foundations, and their implications for environmental problems and public policy.

Effective: Fall 2003

PHIL 014 (GH;US)

Philosophy of Love and Sex (3) Explores Western theories and attitudes concerning intimacy and examines various ethical issues involving love and sex.

Effective: Summer 2005

PHIL 083S (GH)

First-Year Seminar in Philosophy (3) Critical introduction to philosophical issues in ethics, social and political theory, religion, art, metaphysics, and epistemology.

Effective: Summer 1999

PHIL 100 (GH)

The Meaning of Human Existence (3) Explores differing views of the significance of human life, the meaning of freedom, and the way to a meaningful life.

Effective: Fall 2003

PHIL 101 (GH)

Pragmatism and American Philosophy (3) An introduction to American thought and its relation to American culture, with a focus on the development of pragmatism.

Effective: Fall 2003

PHIL 102 (GH)

Existentialism and European Philosophy (3) Introduction to European philosophy and issues of life, death, meaning, and absurdity, with a focus on existentialism and its development.

Effective: Fall 2003

PHIL 103 (GH)

Introduction to Ethics (3) Ethical theory about virtue, duty, autonomy, and life quality applied to moral problems, including character, violence, oppression, abortion, and suicide.

Effective: Fall 2003

PHIL 103W (GH)

Introduction to Ethics (3) Ethical theory about virtue, duty, autonomy, and life quality applied to moral problems, including character, violence, oppression, abortion, and suicide.

Effective: Fall 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 105 (GH)

Introduction to Philosophy of Law and Legal Ethics (3) Historical and contemporary philosophies of law; concepts of responsibility, property, rights, and justice; and ethical issues in legal practice.

Effective: Fall 2003

PHIL 106 (GH)

Introduction to Business Ethics (3) Studies ethical foundations of business and ethical problems in business practices such as advertising, international trade, labor relations, and marketing.

Effective: Fall 2003

PHIL 107 (S T S 107) (GH)

Introduction to Philosophy of Technology (3) The character of technology; its relation to human values; philosophical assumptions in its development; and how it transforms the world.

Effective: Spring 2004

PHIL 108 (GH)

Introduction to Social and Political Philosophy (3) Critical introduction to political authority, rights, justice, community,

inequality, power, pluralism, and other contemporary, social, and political issues.
Effective: Fall 2003

PHIL 108W (GH)

Introduction to Social and Political Philosophy (3) Critical introduction to political authority, rights, justice, community, inequality, power, pluralism, and other contemporary, social, and political issues.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 109 (GH)

Introduction to Aesthetics (3) Examines the nature of art and aesthetic experience, art's relation to beauty and truth, and the nature of creativity.

Effective: Fall 2003

PHIL 110 (GH)

Introduction to Philosophy of Science (3) Examines science's assumptions about knowledge and reality, the relation between science and culture, and the nature of scientific progress.

Effective: Fall 2003

PHIL 113 (GH)

Introduction to Philosophy of Literature (3) Examines philosophical ideas in literature, literary forms in philosophies, style and genre, and relation of philosophy, literature, writing, and culture.

Effective: Fall 2003

PHIL 115 (GH)

Introduction to Philosophy and Education (3) Examines the nature and goals of education, the philosophical foundations of educational theories, and their economic, political, and cultural implications.

Effective: Fall 2003

PHIL 118 (GH)

Introduction to Environmental Philosophy (3) Considers the moral status of the environment and applies ethical theory to issues such as preservation, hunger, pollution, and sustainability.

Effective: Fall 2003

PHIL 119 (GH)

Ethical Leadership (3) Introduction to philosophical theories of ethics and leadership. Uses literary and biographical texts in developing skills of application.

Effective: Summer 2007

PHIL 122 (GH)

Introduction to Philosophy of History (3) Examines methodological foundations and interpretations of history, the objectivity of history, and the issue of history as design or chance.

Effective: Fall 2003

PHIL 123 (GH)

Introduction to Ethics in Media and Journalism (3) Studies ethical problems, human values, and politics in differing media forms and the ways media shape such problems and values.

Effective: Fall 2003

PHIL 124 (GH)

Introduction to Philosophy of Religion (3) Explores the meaning of religious belief and experience, the existence of God, ideas of spirituality, and the question of immortality.

Effective: Fall 2003

Prerequisite: third-semester standing

PHIL 125 (GH)

Introduction to Theories of Knowledge (3) Historical and contemporary views on the foundations and conditions of knowledge, belief, justification, and truth, conception, perception, and interpretation.

Effective: Fall 2003

PHIL 125W (GH)

Introduction to Theories of Knowledge (3) Historical and contemporary views on the foundations and conditions of knowledge, belief, justification, and truth, conception, perception, and interpretation.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 126 (GH)

Introduction to Metaphysics (3) Explores the nature of being and reality, the problem of free will and the mind/body problem, identity, and causality.

Effective: Fall 2003

PHIL 126W (GH)

Introduction to Metaphysics (3) Explores the nature of being and reality, the problem of free will and the mind/body problem, identity, and causality.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 127 (GH)

Introduction to Philosophy of Mind (3) Problems and concepts of mind and consciousness including mind-brain identification, the nature of subjectivity, identity, and artificial intelligence.

Effective: Fall 2003

PHIL 129 (GH)

Introduction to Philosophy of Language (3) Studies the nature of meaning in language, how we acquire language, communication, signs, and language as descriptive of reality.

Effective: Fall 2003

PHIL 132 (RL ST 131) (GH)

Introduction to Bioethics (3) Studies questions of ethics in relation to biotechnology research and implementation, genetic engineering, medicine, animal and human rights.

Effective: Fall 2003

PHIL 135 (J ST 135, RL ST 135) (GH;IL)

Ethics in Jewish Tradition and Thought (3) Examination of Jewish ethical thought from biblical foundations to the modern period, with attention to contemporary issues in moral philosophy.

Effective: Summer 2015

PHIL 200 (CAMS 200) (GH)

Ancient Philosophy (3) Examines the thought and influence of major Western thinkers from the pre-Socratics to the neo-Platonists, emphasizing Plato and Aristotle.

Effective: Fall 2003

PHIL 201 (GH)

Medieval Philosophy (3) Examines the thought and influence of major Western thinkers from the fourth to the fifteenth centuries, emphasizing Augustine and Aquinas.

Effective: Fall 2003

PHIL 202 (GH)

Modern Philosophy (3) Examines the thought and influence of major Western thinkers from Descartes to Kant, emphasizing rationalism and empiricism, and critical philosophy.

Effective: Fall 2003

PHIL 203 (GH)

Nineteenth Century Philosophy (3) Examines the thought and influence of major Western thinkers from Hegel to Nietzsche, including Marx, Kierkegaard, and Schopenhauer.

Effective: Fall 2003

PHIL 204 (GH)

Twentieth Century Philosophy (3) Examines the thought and influence of major Western thinkers of the century, including pragmatists, phenomenologists, existentialists, critical theorists, and feminists.

Effective: Fall 2003

PHIL 208 (GH)

Contemporary Philosophy (3) Recent trends in philosophical thought and culture, hybrid philosophies, and the philosophical landscape of the future.

Effective: Fall 2003

PHIL 221 (GH)

Philosophy of Science (3) An inquiry into the form and function of concepts, laws, theories, and into the character of scientific explanation and prediction.

Effective: Fall 2003

PHIL 233 (S T S 233) (GH)

Ethics and the Design of Technology (3) Ethics and individual and group decision-making in the design of technology including design projects and specific attention to institutional ethics.

Effective: Spring 2004

PHIL 280H (FD SC 280H) (GH)

Food, Values, and Health (3) The perceived relationship between food and health, emphasizing the conceptual nature of both; and how values contribute to the relationship.

Effective: Spring 2007

PL SC 111 (GH)

Debating the Purpose of Government (3) Students will become acquainted with a variety of political theories and debate their usefulness in considering contemporary political controversies.

Effective: Summer 2012

RL ST 001 (GH;US;IL)

Introduction to World Religions (3) An historical and comparative survey of the principal beliefs and practices of the world's major religions.

Effective: Summer 2005

RL ST 003 (ASIA 003) (GH;US;IL)

Introduction to the Religions of the East (3) Religious experience, thought, patterns of worship, morals, and institutions in relation to culture in Eastern religions.

Effective: Spring 2015

RL ST 004 (CAMS 004, J ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationships to culture.

Effective: Summer 2005

RL ST 012 (CAMS 012, J ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

RL ST 044 (CAMS 044) (GH;IL)

Ancient Near Eastern and Egyptian Mythology (3) Survey of major ancient Mediterranean myths, gods, and goddesses in their cultural contexts; influence on later cultures.

Effective: Summer 2005

RL ST 070 (CAMS 070, J ST 070) (GH;IL)

Prophecy: The Near East Then and Now (3) Prophecy in the ancient Near East, the ancient Jewish and Christian traditions, and today.

Effective: Summer 2007

RL ST 083S (GH)

First-Year Seminar in Religious Studies (3) Critical approaches to the dimensions and directions in Religious Studies.

Effective: Summer 1999

RL ST 090 (CAMS 090, J ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from earliest times (c. 3000 BCE) to the present.

Effective: Fall 2015

RL ST 101 (GH;IL)

Comparative Religion (3) Comparative or historical analysis of religious factors--worship, theology, ethics, scriptures, etc., in two or more religious traditions.

Effective: Summer 2005

RL ST 102 (CAMS 102, HIST 102, J ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

RL ST 103 (ASIA 103) (GH;US;IL)

Introduction to Hinduism (3) Historical development of Hinduism to the present.

Effective: Spring 2015

RL ST 104 (ASIA 104) (GH;US;IL)

Introduction to Buddhism (3) A general survey of the basic doctrine, practice, and historical development of Hinayana and Mahayana Buddhism.

Effective: Spring 2015

RL ST 105 (GH;US;IL)

Buddhism in the Western World (3) A general survey of the development of Buddhism as a religious tradition in the West, focusing especially on America.

Effective: Summer 2005

RL ST 106 (J ST 106) (GH;IL)

Mysticism and Kabbalah (3) A survey of the history, philosophy, and cultural impact of various mystical traditions in relation to world religions.

Effective: Fall 2015

RL ST 107 (GH;US;IL)

Introduction to Islam (3) Community and message of the early movement; development of authoritative structures and traditions; proliferation of sects; theology and creeds; mysticism.

Effective: Spring 2006

RL ST 110 (CAMS 110, J ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.

Effective: Summer 2005

RL ST 111 (CAMS 111, J ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.

Effective: Summer 2005

RL ST 113 (J ST 113, CAMS 113, CMLIT 113) (GH;IL)

Myths and Legends of the Jews (3) Comparative study of diverse interpretations of stories from the Bible in Judaism and Christianity.

Effective: Fall 2016

RL ST 114 (J ST 114) (GH;US;IL)

Modern Judaism (3) Trends in Jewish life and thought since the French revolution; Judaism's responses to the challenge of modernity.

Effective: Summer 2005

RL ST 115 (HIST 115, J ST 115) (GH;US)

The American Jewish Experience (3) Examination of the history, culture, social tensions, and contributions of Jews and Judaism in America.

Effective: Fall 2015

RL ST 116 (GH;IL)

Muslims in America (3) This course is a study of Muslims from multiple racial, cultural, and national perspectives; it explores what it means to be a Muslim in America.

Effective: Summer 2010

RL ST 120 (CAMS 120, J ST 120) (GH)

New Testament (3) Introduction to the history, literature, and religion of early Christianity in its Jewish-Hellenistic setting.

Effective: Spring 2004

RL ST 121 (CAMS 121, J ST 112) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the content of first century Palestinian Judaism.

Effective: Fall 2015

RL ST 122 (CAMS 122, J ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

RL ST 123 (CAMS 123, J ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

RL ST 124 (CAMS 124, J ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.

Effective: Summer 2005

RL ST 125W (GH)

Modern Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the sixteenth century to the present.

Effective: Summer 1995

RL ST 130 (GH)

The Ethics of Western Religion (3) History of theological-social ethics of the Judaeo-Christian tradition.

Effective: Summer 1995

RL ST 131 (PHIL 132) (GH)

Introduction to Bioethics (3) Studies questions of ethics in relation to biotechnology research and implementation, genetic engineering, medicine, animal and human rights.

Effective: Spring 2003

RL ST 134 (CAMS 134) (GH;IL)

Archaeology of Biblical Israel (3) Archaeology of Biblical Israel from 1200 B.C.E. to c. 640 C.E.; relationship between archaeological and textual evidence.

Effective: Fall 2015

RL ST 135 (J ST 135, PHIL 135) (GH;IL)

Ethics in Jewish Tradition and Thought (3) Examination of Jewish ethical thought from biblical foundations to the modern period, with attention to contemporary issues in moral philosophy.

Effective: Summer 2015

RL ST 137 (WMNST 137, J ST 137) (GH;US;IL)

Women and Religion (3) Jewish and Christian religious views on womanhood; thought and lives of important religious women; and feminist understandings of these.

Effective: Fall 2012

Prerequisite: third-semester standing

RL ST 140Y (AM ST 140Y) (GH;US)

Religion in American Life and Thought (3) The function, contributions, tensions, and perspectives of religion in American culture.

Effective: Summer 2005

RL ST 145 (AF AM 145) (GH;US;IL)

African American Religions and Spirituality (3) History and significance of the religious dimension of the Black American struggle for equality from enslavement to the contemporary period.

Effective: Spring 2015

RL ST 146 (AF AM 146) (GH;US)

The Life and Thought of Martin Luther King, Jr. (3) A survey of the civil rights leader including his religious beliefs, intellectual development, and philosophy for social change.

Effective: Spring 2013

RL ST 147 (AF AM 147) (GH;US)

The Life and Thought of Malcolm X (3) The life of Malcolm X/El Hajj Malik El Shabazz (1925-1965) and his social, political, economic, and moral thought.

Effective: Fall 2013

RL ST 153 (CAMS 153, J ST 153) (GH;IL)

Dead Sea Scrolls (3) Examines the discovery, contents, and interpretations of the Dead Sea Scrolls, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

RL ST 160 (CAMS 160, J ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.

Effective: Summer 2014

RL ST 164 (ARAB 164) (GH;IL)

Muhammad and the Qur'an (3) History of the Qur'an and its interpretation by the early Muslim community; life of Muhammad and his role within Islam.

Effective: Fall 2015

RL ST 190 (J ST 190, HIST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.

Effective: Summer 2015

RL ST 280 (WMNST 280, J ST 280) (GH;IL)

WOMEN AND JUDAISM (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.

Effective: Spring 2006

RL ST 422 (AM ST 422, HIST 422) (GH;US)

Religion and American Culture (3 per semester/maximum of 6) Selected topics, problems, or historical movements in American religion. Relation between religion and American culture.

Effective: Fall 2015

Prerequisite: 3 credits of history or religious studies

RL ST 423 (HIST 423) (GH;IL)

Orthodox Christianity: History and Interpretations (3) Examines Orthodox Christianity from origins to present using critical historical analysis of primary and secondary sources.

Effective: Spring 2015

Prerequisite: HIST 105

RUS 083S (GH;US;IL)

First-Year Seminar in Russian (3) Russia's cultural past and present.

Effective: Summer 2005

RUS 100 (GH;IL)

Russian Culture and Civilization (3) The Russian people from the tenth century to present times; their literature, arts, music, science, and philosophy. In English.

Effective: Summer 2005

RUS 110 (GH;IL)

Russian Folklore (3) Study of byliny, lyrical and historical songs, folktales, drama, ceremonial poetry, chants, charms, proverbs, and mythology of Russia. In English.

Effective: Summer 2005

RUS 143 (GER 143) (GH;IL)

The Culture of Stalinism and Nazism (3) The culture of Stalinist Russia and Nazi Germany in comparative perspective.

Effective: Summer 2005

S T S 100 (GH)

Science, Technology, and Culture (3) A survey of the development and culture of science, technology, and medicine in world history.

Effective: Spring 2011

S T S 101 (GH)

Modern Science, Technology, and Human values (3) Relationships of science and technology to human aspirations, values, and arts.

Effective: Spring 1996

S T S 107 (PHIL 107) (GH)

Introduction to Philosophy of Technology (3) The character of technology; its relation to human values; philosophical assumptions in its development; and how it transforms the world.

Effective: Spring 2004

S T S 122 (GH)

History of Science I (3) A history of science and culture from Stonehenge to the scientific revolution.

Effective: Fall 2014

S T S 123 (GH)

History of Science II (3) A history of science and culture from the scientific revolution to the present.

Effective: Fall 2014

S T S 124 (HIST 124) (GH;US;IL)

History of Western Medicine (3) This course explores the history of health, illness, and medicine in western society.

Effective: Summer 2008

S T S 233 (PHIL 233) (GH)

Ethics and the Design of Technology (3) Ethics and individual and group decision-making in the design of technology including design projects and specific attention to institutional ethics.

Effective: Spring 2004

S T S 235 (GH)

Science and Religion (3) This course investigates the relationship between science and religion in multiple cultures.

Effective: Spring 2009

Prerequisite: completion of a basic composition course or the equivalent S T S 100 or S T S 101 or completion of 30 credits of coursework

SPAN 083S (GH;IL)

First-Year Seminar in Hispanic Literatures and Cultures (3) Introduction to the study of Hispanic literatures and cultures.

Effective: Summer 2005

SPAN 130 (GH;IL)

Iberian Civilization (3) Spanish and Portuguese life from the medieval period to the present; literature, the arts, and contemporary problems in historical perspective.

Effective: Spring 2006

SPAN 131 (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.

Effective: Summer 2005

SPAN 131Y (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.

Effective: Summer 2005

SPAN 230 (GH)

Masterpieces of Spanish Literature in English Translation (3) Study of works and authors of international importance; lectures, readings, and written works in English.

Effective: Spring 2003

SPAN 315 (LTNST 315) (GH;US)

Spanish and Spanish-speakers in the U.S. (3) In this course, we investigate various aspects of the language(s) and language behaviors of U.S. Latinos.

Effective: Summer 2006

SPAN 326 (GH;US)

Reading the Border/Lands (3) This course examines representations of the U.S.-Mexico border in relation to the actual geographic space.

Effective: Summer 2011

SPAN 479 (LTNST 479) (GH;US)

U.S. Latina/o Culture en Espanol (3) The history, culture, art, and social issues of Latinos in the United States.

Effective: Summer 2014

Prerequisite: SPAN 253W

UKR 100 (GH;IL)

Ukrainian Culture and Civilization (3) Survey of Ukrainian culture and civilization from the Middle Ages to the present.

Effective: Summer 2005

WMNST 008 (PHIL 008) (GH)

Philosophy and Feminism (3) Explores diverse feminist philosophies of culture and knowledge, and examines gender's role in accounts of reality, truth, morality, and justice.

Effective: Spring 2006

WMNST 083S (GH;US;IL)

First-Year Seminar in Women's Studies (3) Critical approaches to the dimensions and directions in Women's Studies.

Effective: Summer 2005

WMNST 101 (AF AM 101) (GH;US)

The African American Woman (3) The sociological, historical and political experiences of African American women, their roles and contributions to society.

Effective: Spring 2013

WMNST 102 (AF AM 102) (GH;IL)

Women of Color: Cross-Cultural Perspective (3) Global examination of value systems of women of color; attention to minority ethnic groups in the United States and developing countries.

Effective: Spring 2013

WMNST 104 (AM ST 104) (GH;US)

Women and the American Experience (3) Selected aspects of the role of women in United States history and culture from colonial to modern times.

Effective: Summer 2005

WMNST 106 (GH;US;IL)

Representing Women and Gender in Literature, Art and Popular Cultures (3) Interdisciplinary consideration of primary

works and scholarship pertaining to women in the humanities and the arts.
Effective: Spring 2013

WMNST 117 (HIST 117) (GH;US;IL)

Women in Modern History (3) Modernization and women: changing images and roles since mid-eighteenth century in the family, workshop, politics, society. Cross-cultural comparisons.
Effective: Summer 2005

WMNST 137 (RL ST 137, J ST 137) (GH;US;IL)

Women and Religion (3) Jewish and Christian religious views on womanhood; thought and lives of important religious women; and feminist understandings of these.

Effective: Fall 2012

Prerequisite: third-semester standing

WMNST 166 (HIST 166) (GH;US)

History of Sexuality (3) Discusses the ideas, practices, and identities surrounding sexuality over several centuries in a variety of contexts, focusing primarily on the US.

Effective: Summer 2012

Prerequisite: one introductory level course in History or Women's Studies

WMNST 194 (ENGL 194) (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by British, American, and other English-speaking women writers.

Effective: Summer 2005

WMNST 213Y (HIST 213Y, AF AM 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.

Effective: Spring 2015

WMNST 225 (ENGL 225, ART H 225) (GA;GH)

Sexuality and Modern Visual Culture (3) An examination of the visual expression of gender and sexual identities in English-speaking cultures since the late nineteenth century.

Effective: Summer 2009

WMNST 227 (ENGL 227) (GH;US;IL)

Introduction to Culture and Sexuality (3) A course addressing the relationships between sexuality, literature, and culture.

Effective: Spring 2013

Prerequisite: ENGL 015 or ENGL 030

WMNST 245 (ENGL 245) (GH;US)

Introduction to Lesbian and Gay Studies (3) An introduction to the study of sex and (homo) sexual identity across a wide range of disciplines and methodologies.

Effective: Spring 2013

WMNST 266Y (HIST 266Y) (GH;US)

Sex and Violence in Nineteenth-Century America (3) Historical Overview of Sex and Violence in the Nineteenth-Century United States.

Effective: Spring 2015

WMNST 280 (J ST 280, RL ST 280) (GH;IL)

Women and Judaism (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.

Effective: Fall 2006

WMNST 301 (GH;US;IL)

Sexualities, Gender and Power: Feminist Thought and Politics (3) An interdisciplinary survey of historical and contemporary feminist theories in both the United States and international contexts.

Effective: Spring 2013

Prerequisite: WMNST 100 or WMNST 106

United States Cultures and International Cultures

All course descriptions are updated periodically.

1538 courses.

A ED 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006

A ED 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006

A ED 225 (GA;US)

Diversity, Pedagogy, and Visual Culture (3) Issues of diversity in art, education, visual culture, and pedagogy.
Effective: Summer 2005

A ED 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006

A ED 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006

A ED 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006

A&A 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

A&A 100 (GA;IL)

Introduction to International Arts (3) An interdisciplinary, multicultural introduction to the arts of the world.
Effective: Summer 2005

A&A 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

A&A 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

A&A 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

A&A 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

AAS 100 (AM ST 160) (GH;US)

Introduction to Asian American Studies (3) An introduction to the history, literature, and culture of Asian America.
Effective: Fall 2013

AAS 428 (ENGL 428) (US)

Asian American Literatures (3 per semester/maximum of 6) A seminar on the literatures and cultures of Asian America, with attention to forms of geographic, historical, and ethnic diversity.
Effective: Summer 2010

ACCTG 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2007

ACCTG 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2007

ACCTG 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2007

ACCTG 461 (IL)

International Accounting (3) Study of international accounting issues with emphasis on need, use, and interpretation of financial accounting required in global business environment.
Effective: Fall 2012

Prerequisite: ACCTG 471 and ACCTG 472

ACCTG 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

AEE 299 (IL)

Foreign Studies (1-12 per semester/maximum of 24) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2014

AEE 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

AERSP 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2008

AERSP 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2008

AERSP 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2008

AERSP 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2008

AF AM 083S (GH;US;IL)

First-Year Seminar in African American Studies (3) Cultural, philosophical, economic, political, and global dynamics of the Black experience in the United States and the Diaspora.

Effective: Fall 2013

AF AM 100 (GS;US)

Living While Black: Themes in African American Thought and Experience (3) What it means to be Black in America by engaging with questions about identity and authenticity, freedom and unfreedom, radicalism and reform, gender and sexuality, and the role of music in African American life.

Effective: Spring 2015

AF AM 101 (WMNST 101) (GH;US)

The African American Woman (3) The sociological, historical, and political experiences of African American women, their roles and contributions to society.

Effective: Spring 2013

AF AM 101U (GH;US)

The African American Woman (3) The sociological, historical, and political experiences of African American women, their roles and contributions to society.

Effective: Fall 2016 Ending: Fall 2016

AF AM 102 (WMNST 102) (GH;IL)

Women of Color: Cross-Cultural Perspective (3) Global examination of value systems of women of color; attention to minority ethnic groups in the United States and developing countries.

Effective: Spring 2013

AF AM 103 (SOC 103, WMNST 103) (US)

Racism and Sexism (3) Critical analysis of the structure of race and gender in the contemporary United States.

Effective: Spring 2013

AF AM 110 (GH;US)

Introduction to African American Studies (3) An introductory survey of African American Studies practice and scholarship, focused on the major methods, figures, texts, and debates that define the field.

Effective: Spring 2013

AF AM 110U (GH;US)

Introduction to African American Studies (3) An introductory survey of African American Studies practice and scholarship, focused on the major methods, figures, texts, and debates that define the field.

Effective: Fall 2016 Ending: Fall 2016

AF AM 126 (INART 126) (GA;US)

The Popular Arts in America: The History of Hip-Hop (3) An examination of the roots, development, and significance of hip-hop in our culture.

Effective: Summer 2014

AF AM 132 (SPAN 132, AFR 132) (IL)

Afro-Hispanic Civilization (3) A general introduction to human and cultural elements of African origin in Spanish- and Portuguese-speaking countries of Latin America.

Effective: Spring 2013

AF AM 139 (ENGL 139) (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.
Effective: Fall 2013

AF AM 145 (RL ST 145) (GH;US;IL)

African American Religions and Spirituality (3) History and significance of the religious dimension of the Black American struggle for equality from enslavement to the contemporary period.
Effective: Spring 2015

AF AM 146 (RL ST 146) (GH;US)

The Life and Thought of Martin Luther King, Jr. (3) A survey of the civil rights leader including his religious beliefs, intellectual development, and philosophy for social change.
Effective: Spring 2013

AF AM 147 (RL ST 147) (GH;US)

The Life and Thought of Malcolm X (3) The life of Malcolm X/El Hajj Malik El Shabazz (1925-1965) and his social, political, economic, and moral thought.
Effective: Fall 2013

AF AM 152 (HIST 152) (GH;US;IL)

African American History (3) African roots; colonial and revolutionary experiences; slavery and abolitionism; civil war and reconstruction; accommodation and protest; the new militancy.
Effective: Fall 2013

AF AM 208 (THEA 208) (GA;US;IL)

Theatre Workshop in Diverse Cultures (3) A performance-oriented class which explores the historic and contemporary theatrical works of various culturally diverse peoples.
Effective: Spring 2013

AF AM 210 (HIST 210) (GH;US)

Freedom's First Generation: African American Life and Work, 1865 to World War II (3) The course will explore the context and events that shaped African American life over the period 1896-1932.
Effective: Spring 2015
Prerequisite: AF AM 100 HIST 021

AF AM 211 (HIST 211) (GH;US;IL)

Slavery and Freedom in the Black Atlantic (3) The course will explore the history and role of African and African-descent people in Africa, the Americas, and Europe.
Effective: Spring 2015
Prerequisite: AF AM 100 or HIST 003 or HIST 020 or HIST 021 or HIST 152

AF AM 212 (US)

African Americans in the New Jim Crow Era, 1968-present (3) An examination of Black political, economic, social, and cultural life in America from the era of colonization to 1905.
Effective: Spring 2015

AF AM 213Y (HIST 213Y, WMNST 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.
Effective: Spring 2015

AF AM 235 (ENGL 235) (US)

From Folk Shouts and Work Songs to Hip Hop Poetry (3) The origins, forms, and function of the oral folk tradition of African Americans.
Effective: Spring 2015
Prerequisite: ENGL 015 or ENGL 030

AF AM 250 (HIST 250) (GH;IL)

Introduction to the Modern Caribbean (3) A survey course which, explores the historical evolution and emergence of the modern Caribbean.
Effective: Fall 2012

AF AM 280 (GH;US)

Historical Ethnography of Freedom (3) Studies the Underground Railroad movement to guide slaves to freedom, and public heritage surrounding this institution. Students use ethnographic approaches.
Effective: Summer 2014

AF AM 302 (BB H 302) (US)

Diversity and Health (3) Exam the relationship of diverse personal and sociocultural factors to health, like socioeconomic class, race-ethnicity, gender, age, and sexual orientation.
Effective: Spring 2013
Prerequisite: PSYCH 100 or SOC 001

AF AM 303 (ANTH 303, WMNST 303) (GS;IL)

Race and Gender in the Americas: Latin American and Caribbean Cultures (3) Utilizing a theoretical framework of intersectionality, this course examines historical and cultural constructions of race and gender in Latin America and the Caribbean.
Effective: Spring 2015

AF AM 364 (WMNST 364) (GS;US)

Black & White Sexuality (3) This course explains how narrow ways of thinking limit our understanding of the diverse

expressions of human sexuality.
Effective: Fall 2012

AF AM 409 (SOC 409) (US)

Racial and Ethnic Inequality in America (3) The impact of inequality and discrimination on individual and group identity among various racial and ethnic groups.

Effective: Spring 2013

Prerequisite: SOC 001

AF AM 409U (US)

Racial and Ethnic Inequality in America (3) The impact of inequality and discrimination on individual and group identity among various racial and ethnic groups.

Effective: Fall 2016 Ending: Fall 2016

Prerequisite: SOC 001

AF AM 412 (THEA 412) (US;IL)

African American Theatre (3) Exploration of the development of African American theatre from its roots in Africa through the Diaspora to the present time.

Effective: Spring 2013

Prerequisite: THEA 100

AF AM 416 (S T S 416) (US;IL)

Race, Gender and Science (3) The class will focus on race and gender as products of science, and how societal values shape scientific activity.

Effective: Fall 2015

Prerequisite: 6 credits in S T S WMNST or AAA S

AF AM 422 (CAS 422) (US)

Contemporary African American Communication (3) A focused study on the continuities between African and African American culture and communication.

Effective: Spring 2013

Prerequisite: CAS 100

AF AM 431 (HIST 431) (US;IL)

Black Liberation and American Foreign Policy (3) This course deals with American foreign policy and Black liberation in Africa since 1945.

Effective: Spring 2013

Prerequisite: AF AM 100 AFR 192 ; PL SC 001 or PL SC 014

AF AM 432 (HIST 432) (IL)

Between Nation and Empire: The Caribbean in the 20th Century (3) An exploration of the political evolution of the Caribbean Region over the course of the 20th Century.

Effective: Fall 2012

Prerequisite: AF AM 250

AF AM 445Y (LER 445Y, PL SC 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

AF AM 460 (PHIL 460) (US;IL)

African American Philosophy (3) Major works by African American Philosophers, on topics of race, freedom, citizenship, nationhood, law and society.

Effective: Spring 2013

Prerequisite: AF AM 100 or PHIL 009 and 5th semester standing

AF AM 465 (HIST 465) (US)

The Post-World War II Civil Rights Movement (3) The civil rights struggle and its impact upon American politics.

Effective: Spring 2015

Prerequisite: AF AM 100 HIST 021 HIST 152 PL SC 001 or PL SC 002

AF AM 469 (ENGL 469) (US)

Slavery and the Literary Imagination (3) The impact of slavery on the petitions, poetry, slave narratives, autobiographies, and novels of African Americans.

Effective: Fall 2012

Prerequisite: ENGL 015 or ENGL 030

AFR 105 (EARTH 105) (GN;IL)

Environments of Africa: Geology and Climate Change (3) Significant natural features of Africa as related to human endeavor; case studies include the Nile, climate change, natural resources.

Effective: Spring 2013

AFR 110 (GS;IL)

Introduction to Contemporary Africa (3) Consideration of influences and forces shaping modern African society; analysis of current local and global problems and issues facing Africa.

Effective: Fall 2012

AFR 110U (GS;IL)

Introduction to Contemporary Africa (3) Consideration of influences and forces shaping modern African society; analysis

of current local and global problems and issues facing Africa.

Effective: Fall 2016 Ending: Fall 2016

AFR 132 (AF AM 132, SPAN 132) (IL)

Afro-Hispanic Civilization (3) A general introduction to human and cultural elements of African origin in Spanish- and Portuguese-speaking countries of Latin America.

Effective: Spring 2013

AFR 150 (GH;IL)

Africa in Cinema (3) The study of the image of Africa as seen in fiction and non-fictional feature length films, ethnographic and documentary films.

Effective: Fall 2012

AFR 191 (HIST 191) (GH;IL)

Early African History (3) Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750.

Effective: Fall 2012

AFR 192 (HIST 192) (GH;IL)

Modern African History (3) Impact of the slave trade, expansion of Islam, colonial conquest, social and cultural transformations, resistance, nationalism, and independence.

Effective: Fall 2012

AFR 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2012

AFR 202 (WMNST 202) (GS;IL)

Gender Dynamics in Africa (3) Critical analysis of multidisciplinary research on relations between men and women in Africa and critique of Western feminist theories.

Effective: Fall 2012

AFR 209 (SOC 209) (GS;IL)

Poverty in Africa (3) The course examines the causes, consequences, and dynamics of poverty in African countries.

Effective: Fall 2013

AFR 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2012

AFR 306 (IL)

Health and Illness in African and Black Diaspora: Cultural Anthropology (3) The course explores anthropological approaches to health, mental and physical illness, in African Worlds and Black Diaspora.

Effective: Summer 2013

Prerequisite: AFR 110

AFR 310 (APLNG 310, GLIS 310) (IL)

Language Rights, Policy, and Planning (3) This is a course on language rights, policy, and planning from individual, group, inter-ethnic, and national perspectives.

Effective: Summer 2016

AFR 335 (ART H 335) (IL)

African Art (3) Introduction to the visual arts of Africa, including contemporary African art and the influence of African art outside Africa.

Effective: Fall 2013

AFR 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2012

AFR 434 (PL SC 434) (IL)

War and Development in Africa (3) This course will examine the relationship between war and development in sub-Saharan Africa in the post colonial era.

Effective: Fall 2012

Prerequisite: PL SC 014 or PL SC 003 or AFR 110

AFR 440 (PL SC 440, I B 440) (US;IL)

Globalization and Its Implications (3) This course explores the socioeconomic implications of globalization.

Effective: Spring 2013

Prerequisite: AF AM 100 or AFR 110 or PL SC 003 or PL SC 014 or PL SC 020 or PL SC 022

AFR 443 (PL SC 443) (IL)

Ethnic Conflict in Africa (3) This course explores the various causes and impacts of ethnic conflicts in the African context.

Effective: Spring 2013

Prerequisite: AF AM 100 AFR 110 PL SC 001 PL SC 003 PL SC 007 PL SC 014 PL SC 017 PL SC 020 or AFRAS 301

AFR 446 (ART H 446) (IL)

Topics in African Art (3 per semester/maximum of 9) Topics vary from "Arts of Eastern and Southern Africa" to "Art of West Africa."

Effective: Spring 2014

Prerequisite: 3 credits of Art History

AFR 447 (ART H 447) (IL)

Topics in the Art of the African Diaspora (3 per semester/maximum of 6) Selected topics in arts of the African Diaspora (South America, Caribbean, USA) including masquerades, textiles, architecture and other art forms.

Effective: Spring 2014

Prerequisite: 3 credits of Art History

AFR 454 (PL SC 454) (IL)

Government and Politics of Africa (3) Contemporary African Politics, institutions, and ideologies; patterns of change, social forces, and nation building in selected African states.

Effective: Fall 2012

Prerequisite: 3 credits from: AFR 110 PL SC 003 PL SC 020 or PL SC 022

AFR 459 (PL SC 459) (IL)

Culture and World Politics (3) Role of culture in world politics.

Effective: Spring 2013

Prerequisite: PL SC 014

AFR 464 (PL SC 464) (IL)

Extractive Industries in Africa (3) Socioeconomic and environmental impacts of extractive industries in Africa.

Effective: Fall 2015

Prerequisite: AFR 110 or at least one of the following: PL SC 003 or PL SC 014 or PL SC 022

AFR 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2012

AG BM 338 (IL)

Agribusiness in the Global Economy (3) Managing agribusinesses in the global food industry, international food product marketing, key public institution and policies affecting food trade.

Effective: Summer 2013

Prerequisite: AG BM 101 AG BM 102 AG BM 106

AG BM 499 (IL)

Foreign Studies - Agribusiness Management (1-12) Study in selected countries of agricultural economic institutions and current agricultural economic problems.

Effective: Summer 2013

AG SC 299 (IL)

Foreign Studies (1-12 per semester/maximum of 24) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2014

AG SC 499 (IL)

Foreign Studies (1-12 per semester/maximum of 24) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2014

AGECO 499 (IL)

Foreign Studies (1-2 per semester/maximum of 4) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

AM ST 100 (GH;US)

Introduction to American Studies (3) A study of selected attempts to identify and interpret movements and patterns in American culture.

Effective: Spring 2006

Prerequisite: third-semester standing

AM ST 100Y (GH;US)

Introduction to American Studies (3) A study of selected attempts to identify and interpret movements and patterns in American culture.

Effective: Spring 2006

Prerequisite: third-semester standing

AM ST 103 (GH;US)

American Masculinities (3) Introduction to aspects of masculinities and manhood in America.

Effective: Summer 2008

AM ST 104 (WMNST 104) (GH;US)

Women and the American Experience (3) Selected aspects of the role of women in United States history and culture from colonial to modern times.

Effective: Summer 2005

AM ST 105 (ENGL 105) (GH;US)

American Popular Culture and Folklife (3) Survey of popular culture, folklife, and ethnicity, synthesizing material from such areas as literature, media, entertainment, print, music, and film.

Effective: Fall 2008

AM ST 135 (ENGL 135) (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.
Effective: Fall 2013

AM ST 140Y (RL ST 140Y) (GH;US)

Religion in American Life and Thought (3) The function, contributions, tensions, and perspectives of religion in American culture.
Effective: Summer 2005

AM ST 160 (AAS 100) (GH;US)

Introduction to Asian American Studies (3) An introduction to the history, literature, and culture of Asian America.
Effective: Fall 2013

AM ST 196 (ENGL 196, AMSTD 196) (GH;US)

Introduction to American Folklore (3) A basic introduction to verbal and non-verbal folklore stressing the basic procedures of collection, classification, and analysis.
Effective: Summer 2005

AM ST 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

AM ST 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

AM ST 307 (ART H 307) (GA;US)

American Art (3) History of art in the English colonies and the United States from the seventeenth century to the present.
Effective: Spring 2008

AM ST 308 (ART H 308) (GA;US)

American Architecture (3) History of the architecture of the United States, as well as its Native American and colonial antecedents.
Effective: Summer 2013

AM ST 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

AM ST 430 (WMNST 430) (US)

Women in American Society (3) A historical study of women's roles and experiences in the United States.
Effective: Spring 2008
Prerequisite: 6 credits of American Studies Sociology or Women's Studies

AM ST 441 (KINES 441) (US)

History of Sport in American Society (3) Background, establishment, and growth of sport in America from colonial times to the present.
Effective: Fall 2007
Prerequisite: KINES 141 or 3 credits of United States history

AM ST 447 (HIST 447) (US)

Recent American History (3) Contemporary economic, social, and political aspects of the United States and its role as a world power since 1945.
Effective: Spring 2014
Prerequisite: HIST 021 3 additional credits in history economics or political science

AM ST 475 (ENGL 431) (US)

Black American Writers (3 per semester, maximum of 6) A particular genre or historical period in the development of Black American literature.
Effective: Fall 2007
Prerequisite: ENGL 015 or ENGL 030

AM ST 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

AN SC 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2014

AN SC 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2013

ANTH 001 (GS;US;IL)

Introductory Anthropology (3) Prehistoric and traditional peoples and cultures; traditional customs and institutions compared with those of modern society.
Effective: Summer 2005

ANTH 008 (GS;IL)

Aztecs, Mayas, and Incas (3) Comparative survey of the development of the pre-Columbian Latin American civilizations.

Effective: Summer 2005

ANTH 009 (GS;IL)

Rise of Civilization in the Old World (3) Evolution of Old World complex societies, especially the first great civilizations of Mesopotamia, Egypt, China, and the Indus Valley.

Effective: Spring 2006

ANTH 011 (GS;IL)

Introductory North American Archaeology (3) Introduction to archaeology of the North American Indians; sites, methods, and results of research interpreted in cultural history.

Effective: Summer 2005

ANTH 045 (GS;US;IL)

Cultural Anthropology (3) Beginnings of human culture; economic life, society, government, religion, and art among traditional peoples.

Effective: Summer 2005

ANTH 045U (GS;US;IL)

Cultural Anthropology (3) Beginnings of human culture; economic life, society, government, religion, and art among traditional peoples.

Effective: Spring 2016

ANTH 060 (J ST 060, PL SC 060, SOC 060) (GS;IL)

Society and Cultures in Modern Israel (3) An introduction to the society and cultures of the State of Israel from 1948 to the present.

Effective: Summer 2006

ANTH 120 (GS;IL)

First Farmers (3) Cross-cultural comparison of the origins of plant and animal domestication and the earliest farming societies.

Effective: Summer 2013

ANTH 146 (GS;US)

North American Indians (3) An introduction to the cultures of the indigenous peoples of North America, north of Mexico, and the effect of contact.

Effective: Spring 2006

ANTH 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ANTH 220 (GA;GH;IL)

Anthropology and Art/ifacts (3) This course examines anthropological approaches to the study of art works, their production, and function in diverse human societies, both past and present.

Effective: Summer 2012

ANTH 221 (GS;IL)

The Ancient Maya (3) The Maya and their neighbors: Origin and Evolution of Classic Maya civilization.

Effective: Spring 2012

Prerequisite: any anthropology course on 100 level or below

ANTH 222 (GS;IL)

Archaeology of Domesticated Animals (3) Biological, ecological and cultural history of animal domestication.

Effective: Summer 2013

ANTH 223 (GS;IL)

European Prehistory (3) The prehistory of European societies from the Upper Palaeolithic to the Iron Age.

Effective: Summer 2013

Prerequisite: 3 credits in 100 level or below ANTH course

ANTH 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ANTH 303 (AF AM 303, WMNST 303) (GS;IL)

Race and Gender in the Americas: Latin American and Caribbean Cultures (3) Utilizing a theoretical framework of intersectionality, this course examines historical and cultural constructions of race and gender in Latin America and the Caribbean.

Effective: Spring 2015

ANTH 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ANTH 435 (IL)

Ancient Economy (3) The course examines the comparative organization and development of ancient economies in both the Old and New Worlds.

Effective: Summer 2013

ANTH 441 (IL)

From Stone Ax to Uzi: Tradition and Change in the New Guinea Highlands (3) This course explores cultural change and

innovation among tribal peoples of Highland New Guinea from stone tool technology to globalization.

Effective: Fall 2009

Prerequisite: ANTH 045

ANTH 454 (IL)

Peoples of South Asia (3) This course will cover nation states of Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka and Maldives.

Effective: Summer 2015

Prerequisite: ANTH 001 or ANTH 045

ANTH 457 (J ST 457, SOC 457) (US;IL)

Jewish Communities: Identity, Survival, and Transformation in Unexpected Places (3) Examines the global array of smaller Jewish communities that have flourished outside the main urban centers of Jewish settlement.

Effective: Summer 2006

Prerequisite: ANTH 001 or ANTH 045 HEBR 010 J ST 010 SOC 001 SOC 005 SOC 007 SOC 015

ANTH 478 (IL)

Cannibalism (3) Explores the cultural institution of cannibalism, uses of the "cannibal" label, and cannibalism's meaning among those who practiced it.

Effective: Spring 2010

Prerequisite: ANTH 045

ANTH 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

APLNG 083S (GS;US;IL)

First-Year Seminar in Applied Linguistics (3) Introduction to the application of theories of language to cognition, culture, gender, society, and second language acquisition.

Effective: Summer 2005

APLNG 200 (GH;IL)

Introduction to Language, Culture, and Social Interaction (3) Introduction to the interrelationships among language, culture, and social interaction and their fundamental links to social identities and discourse communities.

Effective: Spring 2009

APLNG 210 (GH;IL)

The Ecology of Global English (3) This course explores how English language enables globalization processes and how globalization changes the structure, norms, and usage of English.

Effective: Spring 2009

APLNG 310 (AFR 310, GLIS 310) (IL)

Language Rights, Policy, and Planning (3) This is a course on language rights, policy, and planning from individual, group, inter-ethnic, and national perspectives.

Effective: Summer 2016

APLNG 427 (CHNS 427) (IL)

Chinese Language, Culture and Society (3) The study of Chinese language and culture and a perspective on the way of life in contemporary Chinese society.

Effective: Spring 2016

Prerequisite: ASIA 100 or equivalent

APLNG 482Y (IL)

Introduction to Applied Linguistics (3) Application of theories of language to psycholinguistics, philosophy of language, anthropological linguistics, sociolinguistics, bi/multilingualism, second language acquisition and teaching.

Effective: Spring 2006

APLNG 493 (IL)

Teaching English as a Second Language (3) Theory, research, and pedagogy that focus on the teaching of English to speakers of other languages in varied contexts.

Effective: Spring 2006

ARAB 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ARAB 110 (GH;IL)

Arab Language, Cultures, and Current Topics (3) Fourth-semester Modern Standard Arabic: study of cultures through authentic discourse, texts, film; development of reading, writing, listening, speaking skills.

Effective: Summer 2010

Prerequisite: ARAB 003 or permission of program

ARAB 164 (RL ST 164) (GH;IL)

Muhammad and the Qur'an (3) History of the Qur'an and its interpretation by the early Muslim community; life of Muhammad and his role within Islam.

Effective: Fall 2015

ARAB 165 (HIST 165, RL ST 165) (IL)

Introduction to Islamic Civilization (3) Islamic history, culture, and religious life c.600-1500 C.E.

Effective: Spring 2006

ARAB 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ARAB 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ARAB 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ARAB 401 (IL)

Advanced Language & Cultures I (3) Fifth-semester Modern Standard Arabic: reading more complex texts, films, further development of conversation, composition skills, Arab cultures, current issues.
Effective: Spring 2008
Prerequisite: ARAB 110 or approval of program

ARAB 402 (IL)

Advanced Language & Cultures II (3) Sixth-semester Modern Standard Arabic: reading more complex texts, films, further development of conversation, composition skills, Arab cultures, current issues.
Effective: Spring 2008
Prerequisite: ARAB 401 or approval of program

ARAB 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ARCH 099 (IL)

Foreign Studies--Architecture (1-15) Individual or group instruction conducted in a foreign country.
Effective: Summer 2005

ARCH 199 (IL)

Foreign Studies--Architecture (1-15) Individual or group instruction conducted in a foreign country.
Effective: Summer 2005

ARCH 299 (IL)

Foreign Studies--Architecture (1-15) Individual or group instruction conducted in a foreign country.
Effective: Summer 2005

ARCH 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006

ARCH 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006
Prerequisite: seventh-semester standing

ARCH 499A (IL)

Rome Study--Architectural Design (6) Individual or group instruction conducted in Rome, Italy.
Effective: Spring 2015
Prerequisite: Students must earn a C or better in: ARCH 332 and A E 424

ARCH 499B (IL)

Architectural Analysis (3) Comparative study of architectural elements and building types through on-site drawing, recording, measurement, sketching and decomposition activity.
Effective: Fall 2011
Prerequisite: Students must earn a C or better in: ART H 201 and ART H 202

ARCH 499C (IL)

Urban Studies Topics (3) A presentation of the history of Rome through the medium of its maps and walking tours of the city.
Effective: Fall 2011
Prerequisite: Students must earn a C or better in: ART H 201 and ART H 202

ARCH 499F (IL)

Architectural Design--Foreign Study (6) Group instruction conducted in a foreign country.
Effective: Summer 2014
Prerequisite: Students must earn a C or better in: ARCH 431 ARCH 480 ARCH 499A and ARCH 311W

ART 122Y (US)

Commentary on Art (3) An introduction to verbal commentary, both oral and written, about art. The development of critical and expressive skills given emphasis.
Effective: Spring 2006

ART 199 (IL)

Foreign Studies--Art (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ART 211 (US)

Introduction to Digital Art and Design Criticism (3) An introduction to the language, aesthetics and cultural impacts of digital art and design in contemporary society.
Effective: Fall 2007

ART 211Y (US)

Introduction to Digital Art and Design Criticism (3) An introduction to the language, aesthetics, and cultural impacts of digital art and design in contemporary society.
Effective: Spring 2010

ART 299 (IL)

Foreign Study--Art (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ART 399 (IL)

Foreign Study--Art (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ART 411 (US)

Seminar in Contemporary Art (3 per semester/maximum of 6) Trends in contemporary art investigated within the framework of studio visitations, museum tours, and through other related avenues of encounter.
Effective: Fall 2006

Prerequisite: ART 122Y ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 475 (ART H 475) (US)

Contemporary Women Artists (3) An interdisciplinary course that investigates women artists who were integral to the production of contemporary art primarily in the Americas, Europe, and Asia.
Effective: Spring 2009

Prerequisite: fifth-semester standing ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program.

ART 499 (IL)

Foreign Studies--Art (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ART H 100 (GA;IL)

Introduction to Art (3) An approach to the understanding of art through a critical analysis of selected works of architecture, painting, and sculpture. Students who have passed ART H 110 may not schedule this course.
Effective: Spring 2006

ART H 111 (GA;IL)

Ancient to Medieval Art (3) Survey of Ancient Egyptian, Greek, Roman, Byzantine, Early Medieval, Romanesque, and Gothic art, with an emphasis on sculpture and painting.
Effective: Spring 2006

ART H 111U (GA;IL)

Ancient to Medieval Art Honors (3) Honors Survey of Ancient Egyptian, Greek, Roman, Byzantine, Early Medieval, Romanesque, and Gothic art, with an emphasis on sculpture and painting.
Effective: Spring 2016

ART H 112 (GA;IL)

Renaissance to Modern Art (3) Survey of Renaissance, Baroque, Rococo, Romantic, Modern, and Contemporary art, with an emphasis on painting, sculpture, and graphic arts.
Effective: Spring 2006

ART H 112U (GA;IL)

Renaissance to Modern Art Honors (3) Honors Survey of Renaissance, Baroque, Rococo, Romantic, Modern, and Contemporary art, with an emphasis on painting, sculpture, and graphic arts.
Effective: Spring 2016

ART H 120 (GA;IL)

Asian Art and Architecture (3) A selective overview of the art and architecture of India, Southeast Asia, China, Korea, and Japan.
Effective: Summer 2005

ART H 130 (GA;US;IL)

Art of Africa, Oceania, and the Americas (3) A selective overview of the indigenous art of Africa, Oceania and the Americas.
Effective: Spring 2013

ART H 140 (GA;IL)

Introduction to the Art and Architecture of the Mayas, Aztecs, and Incas (3) This course examines the artistic and architectural production of Pre-Columbian Mesoamerica and the Andes.
Effective: Spring 2016

ART H 199 (IL)

Foreign Study--Art History (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ART H 201 (GA;IL)

Ancient to Medieval Architecture (3) A survey of Prehistoric, Ancient Near Eastern Egyptian, Greek, Roman, Early

Christian, Byzantine, Early Medieval, Romanesque, and Gothic architecture.
Effective: Spring 2006

ART H 202 (GA;US;IL)

Renaissance to Modern Architecture (3) A survey of Renaissance, Baroque, Rococo, Romantic, Victorian, Modern, Post-Modern, and Contemporary architecture in Europe and America.
Effective: Spring 2006

ART H 299 (IL)

Foreign Study--Art History (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

ART H 301 (GA;IL)

Egyptian and Mesopotamian Art (3) Art of the Ancient Near East, including Egypt, Mesopotamia, and neighboring civilizations.
Effective: Spring 2006

ART H 302 (GA;IL)

Art of the Early Middle Ages (3) A survey of the art of Western Europe from the Early Christian era through the Ottonian Empire, c.300-1050 A.D.
Effective: Spring 2006

ART H 303 (GA;IL)

Italian Renaissance Art (3) The major arts in Italy from the thirteenth century A.D. through the Renaissance; emphasis on sculpture and painting.
Effective: Spring 2006

ART H 304 (GA;IL)

Italian, Spanish, and Spanish Colonial Baroque Art and Architecture (3) A survey of painting, sculpture, and architecture in Italy, Spain, and the Spanish Americas from 1600-1750.
Effective: Fall 2010

ART H 305 (GA;IL)

Romanticism and Revolution (3) A survey of painting and sculpture in Europe 1780-1860, from the origins of Neoclassicism through Romanticism and Realism.
Effective: Fall 2012

ART H 307 (AM ST 307) (GA;US)

American Art (3) History of art in the English colonies and the United States from the seventeenth century to the present.
Effective: Spring 2008

ART H 308 (AM ST 308) (GA;US)

American Architecture (3) History of the architecture of the United States, as well as its Native American and colonial antecedents.
Effective: Summer 2013

ART H 311 (GA;IL)

Greek and Roman Art (3) Greek and Roman art, with emphasis on painting and sculpture.
Effective: Spring 2006

ART H 312 (GA;IL)

Romanesque and Gothic Art (3) Survey of the architecture, sculpture, and painting of the Christian church in western Europe from 1000 to 1500.
Effective: Spring 2006

ART H 313 (GA;IL)

Northern Renaissance Art (3) Art in northern Europe in the fifteenth and sixteenth centuries, emphasizing painters such as Van Eyck, Durer, and Bruegel.
Effective: Spring 2006

ART H 314 (GA;IL)

Art in the Age of Rembrandt (3) Dutch and Flemish painting in the seventeenth century.
Effective: Spring 2006

ART H 315 (ASIA 315) (GA;IL)

Architecture and Art of South and Southeast Asia (3) Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present.
Effective: Summer 2010

ART H 320 (GA;IL)

Chinese Art (3) A general survey of the great periods of Chinese art from the Shang dynasty until the modern period.
Effective: Summer 2005

ART H 325 (GA;IL)

Impressionism to Surrealism (3) A survey of European painting and sculpture from ca. 1850 to ca. 1940.
Effective: Spring 2006

ART H 326 (GA;US;IL)

Art Since 1940 (3) An international survey of painting, sculpture, photography and other media since 1940.
Effective: Summer 2012

ART H 330 (GA;IL)

Islamic Architecture and Art (3) Survey of the art and architecture of Islamic lands from the late seventh century until the eighteenth century.
Effective: Summer 2005

ART H 335 (AFR 335) (GA;IL)

African Art (3) Introduction to the visual arts of Africa, including contemporary African art and the influence of African art outside Africa.
Effective: Fall 2013

ART H 399 (IL)

Foreign Study--Art History (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

Prerequisite: ART H 100 or ART H 110 or ART H 111 or ART H 112

ART H 401 (IL)

Greek Art and Architecture (3-9) Developments in Greek art and architecture, tenth century B.C. to first century B.C.; emphasis on the importance of Greek sanctuaries.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 or ART H 311

ART H 402 (IL)

The Illuminated Manuscript (3) Specific stylistic periods in manuscript painting from A.D. 500-1500 in Western Europe and Byzantium.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 302 or ART H 312

ART H 405 (US;IL)

Pioneers of Modern Architecture (3 per semester/maximum of 6) Selected period or theme in the development of modern architecture during the nineteenth and/or early twentieth centuries.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 202 or ART H 307

ART H 411 (IL)

Roman Art (3-9) Roman sculpture and painting from Augustus to Constantine.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 or ART H 311

ART H 412 (IL)

The Gothic Cathedral (3) Specific aspects of Romanesque and Gothic church architecture of western Europe, especially France and England, between 1000-1500.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 ART H 302 or ART H 312

ART H 415 (US)

The Skyscraper (3) Origin and evolution of the skyscraper as seen against the background of cultural conditions and technological factors.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 202 or ART H 307

ART H 416 (US)

Studies in American Art (3 per semester/maximum of 6) Selected time periods and/or issues in the art of the United States.

Effective: Fall 2013

Prerequisite: 3 credits of ART H

ART H 420 (IL)

Russian Architecture (3) Russian architecture from the first Orthodox churches of the late tenth century to the end of the Soviet Union.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 112 ART H 201 or ART H 202

ART H 422 (IL)

Studies in Medieval Sculpture (3-9) Specific studies of western European sculpture, 300-1500, with attention to sources, styles, type, and iconography.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 ART H 302 or ART H 312

ART H 423 (IL)

Studies in Italian Renaissance Art (3-9) Specific studies of Italian Renaissance art, including the work of artists such as Leonardo da Vinci, Michaelangelo, and Raphael.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 202 or ART H 303

ART H 424 (IL)

Masters of Northern Baroque Art (3) Seventeenth-century painters in Flanders and Holland, including the works of artists such as Rubens, Rembrandt, and Vermeer.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 or ART H 314

ART H 425 (IL)

Topics in Northern Renaissance Art (3 per semester/maximum of 6) Focuses on a topic of interest in Netherlandish and/or German art between 1300 and 1600.

Effective: Spring 2014

Prerequisite: 3 credits of Art History

ART H 426 (US;IL)

Iconoclasm: Powerful Images and their Destruction (3) Iconoclasm: exploring the political, religious, and social motivations behind the destruction of powerful imagery throughout history.

Effective: Summer 2009

Prerequisite: 3 credits of Art History in any area

ART H 427 (IL)

Topics in Global Artistic Communication (3 per semester/maximum of 6) Explores a specific time period in art history cross-culturally in Europe, Asia, Africa, and/or the Americas.

Effective: Summer 2014

Prerequisite: 3 credits in Art History

ART H 429 (IL)

Studies in Baroque Art (3) Selected topics in the painting, sculpture, and architecture of seventeenth-century Italy, France, Flanders, Holland, and Spain.

Effective: Spring 2009

Prerequisite: 6 credits in art history (ART H)

ART H 435 (IL)

Studies in Modern Art (3-6) Lectures focusing on a selected movement of nineteenth- or twentieth-century art.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 305 ART H 307 or ART H 325

ART H 440 (ASIA 440) (IL)

Monuments of Asia (3-9 per semester/maximum of 9) An exploration of major Asian sites and monuments through a focus on their historical and cultural significance.

Effective: Summer 2012

Prerequisite: ART H 100 or ART H 120 or ART H 315 or ART H 320 or ART H 330

ART H 442 (IL)

Late Antique and Early Christian Art (3) Survey of the architecture, painting, and minor arts of Christian society from the beginning to the mid-sixth century.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 or ART H 302

ART H 445 (IL)

Oceanic Art (3) Survey of the arts of Oceania (Polynesia, Micronesia, Melanesia), including masks, sculpture, textiles, architecture and other art forms.

Effective: Summer 2012

Prerequisite: 3 credits of Art History

ART H 446 (AFR 446) (IL)

Topics in African Art (3 per semester/maximum of 9) Topics vary from "Arts of Eastern and Southern Africa" to "Arts of West Africa."

Effective: Spring 2014

Prerequisite: 3 credits of Art History

ART H 447 (AFR 447) (IL)

Topics in the Art of the African Diaspora (3 per semester/maximum of 6) Selected topics in arts of the African Diaspora (South America, Caribbean, USA) including masquerades, textiles, architecture and other art forms.

Effective: Spring 2014

Prerequisite: 3 credits of Art History

ART H 450 (US;IL)

The History of Photography (3) The history of photography from 1839, with particular emphasis on the relationship with the plastic arts.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 ART H 305 ART H 307 or ART H 325

ART H 452 (IL)

Byzantine Art (3) Monumental and minor arts of Byzantium and related areas from the reign of Justinian to the Turkish conquest of Constantinople.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 111 ART H 201 or ART H 302

ART H 456 (IL)

Renaissance and Baroque Palaces (3) This course examines palace architecture and decoration in Italy, France, England, and Germany from 1450-1700.

Effective: Spring 2011

Prerequisite: ART H 100 or ART H 112 or ART H 202 or ART H 303 or ART H 304

ART H 458 (IL)

Baroque Capitals of Europe (3) This course examines the architecture and urbanism of European capital cities from 1600-1800.

Effective: Spring 2010

Prerequisite: ART H 100 or ART H 112 or ART H 202 or ART H 304 or ART H 314

ART H 460 (IL)

Art and Empire: Aztec, Inca and Spanish (3) This course is a comparative study of the artistic production used in Aztec, Inca and Spanish empires.

Effective: Summer 2012

Prerequisite: 3 credits of ART H

ART H 462 (IL)

Studies in Latin American Art (3 per semester/maximum of 6) Specific studies of the visual and material culture created in Latin America from the colonial through the modern era.

Effective: Summer 2012

Prerequisite: 3 credits of Art History

ART H 464 (IL)

French Baroque Painting (3) Examination of seventeenth-century French painting, including Italian influences; the provincial, Classical, and official styles in France.

Effective: Spring 2006

Prerequisite: ART H 100 ART H 112 or ART H 304

ART H 475 (ART 475) (US)

Contemporary Women Artists (3) An interdisciplinary course that investigates women artists who are integral to the production of contemporary art primarily in the Americas, Europe, and Asia.

Effective: Spring 2009

Prerequisite: Fifth semester standing ART H 111 ART H 112 and enrollment in the ART BA ART BFA Art Education or Integrative Arts degree program

ART H 499 (IL)

Foreign Study--Art History (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ASIA 003 (RL ST 003) (GH;US;IL)

Introduction to the Religions of the East (3) Religious experience, thought, patterns of worship, morals, and institutions in relation to culture in Eastern religions.

Effective: Spring 2015

ASIA 004 (CMLIT 004) (GH;IL)

Introduction to Asian Literatures (3) Comparative interpretations of narrative, drama, lyric, and other writings from East Asia and other regions, viewed as world literature.

Effective: Fall 2010

ASIA 083S (GH;IL)

Asian Studies First Year Seminar (3) The meaning and advantages of a Liberal Arts education in context of a specific discipline.

Effective: Fall 2015

ASIA 100 (GH;IL)

What is Asia? (3) An introduction to the history, literatures, politics, and cultures of Asia.

Effective: Fall 2012

ASIA 103 (RL ST 103) (GH;US;IL)

Introduction to Hinduism (3) Historical development of Hinduism to the present.

Effective: Spring 2015

ASIA 104 (RL ST 104) (GH;US;IL)

Introduction to Buddhism (3) A general survey of the basic doctrine, practice, and historical development of Hinayana and Mahayana Buddhism.

Effective: Spring 2015

ASIA 120Y (GH;IL)

South Asia: A Literary History (3) The course traces the cultural history of South Asia by studying its literary tradition from ancient to modern times.

Effective: Summer 2014

ASIA 171 (HIST 171) (GH;IL)

Introduction to South Asian History 2: Early Modern to Contemporary (3) An introduction to South Asian history from early modern to contemporary times.

Effective: Spring 2015

ASIA 172 (HIST 172, JAPNS 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.

Effective: Fall 2016

ASIA 174 (HIST 174) (GH;IL)

The History of Traditional East Asia (3) Comparative cultural, institutional, and social history of traditional China and Japan to their contact with the industrialized West.

Effective: Fall 2016

ASIA 175 (HIST 175) (GH;IL)

The History of Modern East Asia (3) Survey of modern East Asian history and civilizations, from the nineteenth century

to roughly the present day.
Effective: Fall 2016

ASIA 177 (HIST 177) (GH;IL)

The Rise of Modern Southeast Asia (3) Study of Southeast Asia from the rise of early empires to the present.
Effective: Summer 2014

ASIA 181 (RL ST 181) (IL)

Introduction to the Religions of China and Japan (3) A survey of the history, philosophy, and cultural impact of the major Far Eastern religions: Confucianism, Taoism, Buddhism, and Shinto.
Effective: Spring 2015

ASIA 182 (HIST 182) (GH;IL)

Asian Trade: Economy, Industrialization and Capitalism in Asia (3) An historical overview of economy, industrialization, globalization and capitalism in Asia from the 16th century to present.
Effective: Summer 2014

ASIA 183 (HIST 183) (GH;IL)

Gender, Family, and Society in East Asia (3) Investigates the history of gender, family, love, and sex in East Asia.
Effective: Summer 2012

ASIA 184 (HIST 184) (GH;IL)

Society and Culture in the Pacific War (3) Examines the role of society and culture in the Pacific War's causes, contexts, realities, and aftermath.
Effective: Summer 2012

ASIA 185 (HIST 185) (GH;IL)

Asian Pop: The History of Popular Culture in Asia (3) A history of popular culture from the early modern period to the present.
Effective: Summer 2014

ASIA 186 (HIST 186) (IL)

The Silk Roads (3) A survey of the Silk Roads and maritime routes connecting premodern Europe and Asia, and the cultures that flourished along them.
Effective: Spring 2016

ASIA 188 (HIST 188) (GH;IL)

Tibet: People, Places and Spaces (3) This course examines the historical, cultural, and ethnic dimensions of Tibet from the seventh century to the present.
Effective: Summer 2012

ASIA 189 (HIST 189) (GH;IL)

Illicit Asia: An Alternative Introduction to Asia (3) A historical introduction to unlawful, illegitimate and forbidden ideas, goods, people and places in modern Asia.
Effective: Summer 2014

ASIA 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

ASIA 200 (GH;IL)

What Are Asian Languages? (3) Introduction to the interrelated notions of language, interaction, and culture centering on regions and languages covered in Asian Studies.
Effective: Spring 2015

ASIA 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

ASIA 315 (ART H 315) (GA;IL)

Architecture and Art of South and Southeast Asia (3) Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present.
Effective: Summer 2010

ASIA 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

ASIA 404 (CMLIT 404) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan.
Effective: Fall 2010

Prerequisite: 3 credits in literature or related field appropriate to this course

ASIA 404Y (CMLIT 404Y) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan, taught with focus on written analysis and interpretation.
Effective: Summer 2013

ASIA 405Y (IL)

Seminar in Asian Studies (3-6 per semester/maximum of 6) An advanced, writing-focused seminar in Asian Studies.

Effective: Fall 2009

Prerequisite: ASIA 100

ASIA 424 (CMLIT 424, KOR 424) (IL)

Transnational Korean Literature (3) Exploration of seminal Korean texts, including poetry, fiction, autobiography, and criticism, from the early twentieth century to the contemporary era.

Effective: Summer 2016

ASIA 425 (KOR 425, CMLIT 425) (IL)

Global Korean Cinema (3) Exploration of Korean cinema from the early twentieth century to the present, with an emphasis on its global/local dynamics.

Effective: Summer 2016

ASIA 440 (ART H 440) (IL)

Monuments of Asia (3-9 per semester/maximum of 9) An exploration of major Asian sites and monuments through a focus on their historical and cultural significance.

Effective: Summer 2012

Prerequisite: ART H 100 or ART H 120 or ART H 315 or ART H 320 or ART H 330

ASIA 463 (PL SC 463) (IL)

Government and Politics of China (3) This course will present an overview of modern Chinese politics since 1949.

Effective: Spring 2016

Prerequisite: PL SC 003 PL SC 014 PL SC 022 or ASIA 100

ASIA 465Y (PL SC 465Y) (IL)

Democratization in Asia (3) A course which identifies components of democracy, such as definitions, measures, datasets, and the democratization process.

Effective: Spring 2016

Prerequisite: PL SC 003 or ASIA 100

ASIA 469 (PL SC 469) (IL)

Government and Politics of South Asia (3) This course offers an overview of the politics of modern South Asia with specific focus on Afghanistan, India and Pakistan.

Effective: Summer 2014

Prerequisite: PL SC 003 PL SC 014 PL SC 022 or ASIA 100

ASIA 475Y (HIST 475Y) (IL)

The Making and Emergence of Modern India (3) India's transition to social, economic, and political modernity through the experience of British colonial rule and the nationalist struggle.

Effective: Spring 2015

Prerequisite: HIST 010 HIST 011 HIST 172 HIST 175 HIST 176 HIST 181 or HIST 191

ASIA 476 (HIST 476) (IL)

Technology & Society in Modern Asia (3) Role of technology in modernization, national identity, and foreign relations of an Asian country from 19th century to present day.

Effective: Summer 2014

Prerequisite: ASIA 100 HIST 172 HIST 173 HIST 174 HIST 175 HIST 176 HIST 183 HIST 184 HIST 188

ASIA 480 (HIST 480) (IL)

Japan in the Age of Warriors (3) An overview of Japan from the 10th to 17th century, a period of political decentralization, cultural efflorescence, and social change.

Effective: Fall 2014

ASIA 481 (HIST 481) (IL)

Modern Japan Since 1800 (3) The transformation of Japan from a relatively isolated, agricultural nation into a highly industrialized world power.

Effective: Fall 2014

Prerequisite: HIST 172 HIST 174 or HIST 175

ASIA 483 (HIST 483) (IL)

Middle China (3) The social, political, and cultural issues and developments from the 8th to 16th century.

Effective: Spring 2015

Prerequisite: HIST 174

ASIA 484Y (HIST 484Y) (IL)

History of Chinese Thought (3) A study of the dynamic historical development of Chinese thought with its diverse expressions from antiquity to the present.

Effective: Fall 2014

Prerequisite: HIST 174 or HIST 175

ASIA 485Y (HIST 485Y) (IL)

China's Last Empire: The Qing Dynasty, 1644-1911 (3) China from 1644 founding of Qing dynasty to 1911 fall; Chinese society and institutions, imperialism and China's internal diversity.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H

ASIA 486 (HIST 486) (IL)

China in Revolution (3) China from 1900 to the present; nationalism, cultural change; development of communism.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H

ASIA 489 (HIST 489, PL SC 486) (IL)

International Culture in East Asia (3) Study of the role of culture in East Asian regional and East-West international relations.

Effective: Summer 2013

Prerequisite: any one of the following: HIST 172 HIST 174 HIST 175 HIST 480 HIST 481 HIST 483 HIST 484 HIST 485 HIST 486

ASIA 493 (HIST 493) (IL)

Japan in the World (3) Study of Japan's foreign relations and position in the international community from the early 19th century to the present.

Effective: Spring 2015

Prerequisite: ASIA 100 HIST 172 HIST 175 or HIST 481

ASIA 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2010

ASTRO 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ASTRO 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ASTRO 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

AYFCE 211 (CAS 222, CIVCM 211) (GS;US;IL)

Foundations: Civic and Community Engagement (3) Conceptual foundations of public scholarship and orientation to contemporary themes and issues in civic and community engagement.

Effective: Summer 2013

AYFCE 211S (GS;US;IL)

Foundations: Civic and Community Engagement (3) Conceptual foundations of public scholarship and orientation to contemporary themes and issues in civic and community engagement.

Effective: Summer 2013

AYFCE 438 (US)

Living in an Increasingly Diverse Society (1-3) Students in this course will explore selected dimensions of diversity through lecture, discussion, speakers, active participation, and experiential learning.

Effective: Summer 2013

AYFCE 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

B A 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

B A 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

B A 364Y (US;IL)

International Business and Society (3) Business organizations and the sociocultural environment; current issues; corporate responsibility; international and multinational business environments.

Effective: Spring 2008

Prerequisite: ENGL 202D MGMT 301

B A 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

B A 499 (IL)

Foreign Study--Business Administration (1-18) Study in selected countries of business institutions, functions, and current business problems.

Effective: Spring 2011

Prerequisite: ACCTG 211 ; ECON 102 ECON 104 ; SCM 200

B E 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2010

B E 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2010

B E 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Fall 2010

B LAW 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2011

B LAW 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2011

B LAW 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2011

B LAW 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2011

B M B 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

B M B 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

B M B 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

BB H 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2009

BB H 251 (US)

Straight Talks I: Advanced Sexual Orientation/Gender Identity Peer Education (3) Exploration of social justice issues, diversity leadership, and group facilitation skills related to lesbian, gay, bisexual, transgender, and ally issues.
Effective: Summer 2005

BB H 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2009

BB H 302 (AF AM 302) (US)

Diversity and Health (3) Examine the relationship of diverse personal and sociocultural factors to health, like socioeconomic class, race-ethnicity, gender, age, and sexual orientation.

Effective: Spring 2013

Prerequisite: PSYCH 100 or SOC 001

BB H 305 (IL)

Introduction to Global Health Issues (3) Course will develop awareness of contemporary issues in global health.

Effective: Spring 2014

Prerequisite: BB H 101

BB H 315 (US)

Gender and Biobehavioral Health (3) Interdisciplinary study of gender, examining the interaction of biological, behavioral, and sociocultural factors on health differentials throughout the lifespan.

Effective: Summer 2005

Prerequisite: BB H 101

BB H 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2009

BB H 402 (IL)

African Health & Development (3) Course will address African health and development strategies in the context of health promotion programs.

Effective: Summer 2010

Prerequisite: BB H 305

BB H 407 (IL)

Global Health Equity (3) Health, social disparities, and equity in the global environment.

Effective: Spring 2015

Prerequisite: BB H 101 or 3 credits of SOC

BB H 440 (H P A 440) (US;IL)

Principles of Epidemiology (3) Theory of epidemiology and significant case studies; potential applications to health care.

Effective: Fall 2008

Prerequisite: BB H 101 or BIOL 110 or H P A 310 ; STAT 200 or STAT 250

BB H 452 (NURS 452, WMNST 452) (US)

Women's Health Issues (3) Exploration of major health issues concerning women today, with an emphasis on social, cultural, and medical influences.

Effective: Fall 2013

Prerequisite: BIOL 141 or PSYCH 100 or WMNST 100

BB H 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2009

BE SC 464 (WMNST 464) (US)

Feminine/Masculine (3) Study of sex role learning; investigating feminine/masculine labeling; implications for contemporary society.

Effective: Spring 2008

Prerequisite: general psychology or general sociology

BIOL 120A (GN;US;IL)

Plants, Places, and People (3) Useful and dangerous plants; historical (archaeological), cultural (ethnological), and economic (anthropocentric) aspects, including structural and chemical characteristics of botanical importance. Students who have passed BIOL (PPATH;S T S) 424 may not schedule this course.

Effective: Spring 2008

BIOL 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

BIOL 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

BIOL 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

BIOL 499A (IL)

Tropical Field Ecology (3) An intensive introduction to tropical biodiversity to be taught in Belize, Central America.

Effective: Summer 2005

Prerequisite: BIOL 220W

BKLV 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

BKLV 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

BKLV 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

BKLV 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

BKLV 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

BME 444 (MATSE 404) (IL)

Surfaces and the Biological Response to Materials (3) Focus is on special properties of surface as an important causative and mediating agent in the biological response to materials.

Effective: Spring 2015

Prerequisite: CHEM 112 or MATSE 112

BRS 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2015

BRS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2015

BRS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2015

C E 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

C E 254 (GHA;US)

Personal & Occupational Safety (3) Students will learn about principles of safety in work and personal settings.

Effective: Spring 2008

C E 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

C E 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

C E 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

C LIT 113 (J ST 113, CAMS 113, RL ST 113) (GH;IL)

Myths and Legends of the Jews (3) Comparative study of diverse interpretations of stories from the Bible in Judaism and Christianity.

Effective: Summer 2015

CAMS 004 (J ST 004, RL ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationships to culture.

Effective: Summer 2005

CAMS 005 (HIST 005) (GH;IL)

Ancient Mediterranean Civilizations (3) Survey of the history and cultures of ancient Mediterranean civilizations in Mesopotamia, Egypt, Syro-Levant, Anatolia, Greece, and Rome.

Effective: Spring 2008

CAMS 010 (GH;IL)

Mesopotamian Civilization (3) Cultural, technological, literary, political, and economic achievements of peoples who occupied the region of Mesopotamia (4,000-331 B.C.E.), in historical context.

Effective: Spring 2006

CAMS 012 (J ST 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

CAMS 025 (GH;IL)

Greek Civilization (3) The origin and development of the ancient Greek people; their political and social institutions, public and private life.

Effective: Summer 2005

CAMS 033 (GH;IL)

Roman Civilization (3) Origin of the Romans; sociopolitical development; food, homes, education, marriage, family life, amusements, private and public worship.

Effective: Summer 2005

CAMS 044 (RL ST 044) (GH;IL)

Ancient Near Eastern and Egyptian Mythology (3) Survey of major ancient Mediterranean myths, gods, and goddesses in their cultural contexts; influence on later cultures.

Effective: Summer 2005

CAMS 045 (GH;IL)

Classical Mythology (3) Introduction to Greek and Roman divinities, heroes and heroines; survey of the major myths and their influence on Western culture.

Effective: Summer 2005

CAMS 070 (J ST 070, RL ST 070) (GH;IL)

Prophecy: The Near East Then and Now (3) Prophecy in the ancient Near East, the ancient Jewish and Christian traditions, and today.

Effective: Summer 2007

CAMS 083S (GH;IL)

First-Year Seminar in Classics and Ancient Mediterranean Studies (3) Critical approach to the study of ancient Mediterranean languages, literatures, and/or material cultures.

Effective: Summer 2005

CAMS 090 (J ST 090, RL ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from earliest times (c. 3000 BCE) to present.

Effective: Fall 2015

CAMS 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CAMS 100 (HIST 100) (GH;IL)

Ancient Greece (3) Greek world from the earliest Aegean cultures to the death of Alexander the Great and the beginnings of Hellenistic civilization.

Effective: Spring 2006

CAMS 101 (HIST 101) (GH;IL)

The Roman Republic and Empire (3) History of the Roman Republic and Empire from the origins of Rome to the disintegration of the Empire.

Effective: Spring 2006

CAMS 102 (HIST 102, J ST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

CAMS 105 (GH;IL)

History of the Ancient Near East (3) History of the Ancient Near East from the end of the Neolithic to the Hellenistic period.

Effective: Summer 2005

CAMS 109Y (GH;IL)

Writing Systems of the World (3) Writing intensive overview of the world's writing systems throughout history.

Effective: Spring 2007

CAMS 110 (J ST 110, RL ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.

Effective: Summer 2005

CAMS 111 (J ST 111, RL ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.

Effective: Summer 2005

CAMS 113 (J ST 113, CMLIT 113, RL ST 113) (GH;IL)

Myths and Legends of the Jews (3) Comparative study of diverse interpretations of stories from the Bible in Judaism and Christianity.

Effective: Fall 2016

CAMS 115 (GH;IL)

Literature of the Ancient Near East (3) Reading and study of literary works from the Ancient Near East, especially from Mesopotamia and Ancient Egypt.

Effective: Fall 2016

CAMS 121 (RL ST 121, J ST 112) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the context of first century Palestinian Judaism.

Effective: Fall 2015

CAMS 122 (J ST 122, RL ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

CAMS 123 (J ST 123, RL ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

CAMS 124 (J ST 124, RL ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.

Effective: Summer 2005

CAMS 134 (RL ST 134) (GH;IL)

Archaeology of Biblical Israel (3) Archaeology of Biblical Israel from 1200 B.C.E. to c. 640 C.E.; relationship between archaeological and textual evidence.

Effective: Fall 2015

CAMS 140 (GH;IL)

Classical Archaeology--Ancient Greece (3) Literary sources and material evidence for society; culture of the inhabitants of Greece in ancient times.

Effective: Summer 2005

CAMS 150 (GH;IL)

Classical Archaeology--Ancient Rome (3) Literary sources for the development of Roman civilization in relation to the relevant archaeological discoveries.

Effective: Summer 2005

CAMS 153 (J ST 153, RL ST 153) (GH;IL)

Dead Sea Scrolls (3) Examines the discovery, contents, and interpretations of the Dead Sea Scrolls, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

CAMS 160 (J ST 160, RL ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.
Effective: Summer 2014

CAMS 180 (HIST 180) (GH;IL)

Ancient Warfare (3) Historical survey of the evolution of warfare in the ancient Mediterranean region from prehistoric times to the Later Roman Empire.
Effective: Summer 2006

CAMS 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CAMS 210 (J ST 210) (GH;IL)

Numismatics and the Historian (3) Numismatics--the scholarly study of coins and medals--is a major tool in the study of Classical history and archaeology.
Effective: Summer 2012

CAMS 250U (GH;IL)

Honors Classics in Literature and Film (3) This honors course explores the Classical Tradition as it thrives in the literature of later epochs and film.
Effective: Summer 2010

CAMS 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CAMS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CAMS 405 (IL)

Law & Economy in the Ancient Near East (3) This course is an overview of the legal and economic texts and institutions in the Ancient Near East.
Effective: Spring 2009
Prerequisite: 6 credits in any undergraduate CAMS courses.

CAMS 442 (KINES 442) (IL)

Sport in Ancient Greece and Rome (3) An examination of the continuity of sport in Greek and Roman societies.
Effective: Spring 2008
Prerequisite: CAMS 025 CAMS 033 CAMS 140 CAMS 150 CAMS 100 CAMS 101 or KINES 141

CAMS 450W (WMNST 450W) (IL)

Gender and Sexuality in Ancient Greece and Rome (3) An examination of gender, sexuality, and sexual desire in ancient Greece and Rome.
Effective: Spring 2016
Prerequisite: 3 credits in CAMS

CAMS 470 (IL)

Languages and Cultures of the Ancient Near East (3) This course is an overview of the languages and cultures that populated the Ancient Near East.
Effective: Spring 2009
Prerequisite: 6 credits in any undergraduate CAMS courses.

CAMS 481 (IL)

Introduction to Middle Egyptian & Hieroglyphics (3) An introduction to the language and script of Ancient Egypt, familiarizing the student with grammar, syntax and lexicon.
Effective: Summer 2012
Prerequisite: 6 credits of any CAMS course

CAMS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CAS 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CAS 200 (US;IL)

Language, Culture, and Communication (3) Introduction to language, language development, cultural literacy, culture, and intercultural communication.
Effective: Summer 2005

CAS 222 (CIVCM 211, YFE 211) (GS;US;IL)

Foundations: Civic and Community Engagement (3) Conceptual foundations of public scholarship and orientation to contemporary themes and issues in civic and community engagement.
Effective: Fall 2010

CAS 271 (US;IL)

Intercultural Communication (3) Introduction to intercultural communication. Focus on topics such as language, identity, prejudice, and intergroup relations on a domestic/ international level.

Effective: Summer 2005

CAS 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CAS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CAS 422 (AF AM 422) (US)

Contemporary African American Communication (3) A focused study on the continuities between African and African American culture and communication.

Effective: Spring 2013

Prerequisite: CAS 100

CAS 455 (WMNST 455) (US)

Gender Roles in Communication (3) Explores the literature on gender research in the discipline of human communication.

Effective: Summer 2005

Prerequisite: CAS 202

CAS 471 (US;IL)

Intercultural Communication Theory and Research (3) Intercultural and cross-cultural communication research theory and practice as applied within and across national boundaries.

Effective: Summer 2005

Prerequisite: CAS 271

CAS 499 (IL)

Foreign Studies (1-9) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CED 400 (US)

Exploring Indigenous Ways of Knowing in Great Lakes Region: Lecture (2.5) Explore concepts and values distinctive to indigenous ways of knowing in the Great Lakes Region through readings, reflections, and library research.

Effective: Summer 2015

Prerequisite: R SOC 011 SOC 001 or equivalent

CED 401 (US)

Exploring Indigenous Ways of Knowing Among the Ojibwe (0.5) Through an intensive cultural engagement students will learn skills important to the pursuit of ethnographic research in cross-cultural contexts.

Effective: Summer 2015

Prerequisite: CED 400A or comparable course

CED 420 (WMNST 420) (US;IL)

Women in Developing Countries (3) Analysis of women's work, experiences, and development policies and practices in Africa, Asia, and Latin America.

Effective: Fall 2014

Prerequisite: 5th semester standing or above

CED 450 (IL)

International Development, Renewable Resources, and the Environment (3) Theories of agricultural and economic development, with particular attention to interactions between development, renewable resources, and the environment.

Effective: Fall 2015

Prerequisite: 6 credits in Environmental Economics Resource Economics or Economics

CED 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

CH E 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2007

CH E 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2007

CH E 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2007

CH E 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2007

CHEM 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CHEM 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CHEM 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CHNS 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

CHNS 110 (IL)

Level Two Chinese B (4) Readings in selected modern Chinese literature (short stories, plays, essays, poems) and other texts; practice in conversation and simple composition.

Effective: Spring 2011

Prerequisite: CHNS 003

CHNS 120 (GH;IL)

Introduction to Chinese Literature and Culture (3) Chinese cultural productions, classical through contemporary; literature and film; changing cultural settings in multiple Chinese-speaking locations. Taught in English.

Effective: Spring 2010

CHNS 121 (GH;IL)

Chinese Film and New Media (3) Survey of Chinese film and new media in the twentieth century and beyond, with attention to changing cultural settings. Taught in English.

Effective: Spring 2010

CHNS 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

CHNS 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

CHNS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

CHNS 401 (IL)

Level Three Chinese A (4) Emphasis on oral proficiency through discussions of aspects of contemporary Chinese culture.

Effective: Spring 2011

Prerequisite: CHNS 110

CHNS 402 (IL)

Level Three Chinese B (4) Readings in representative works of traditional and modern literature; practice in composition; study of aspects of Chinese culture.

Effective: Spring 2011

Prerequisite: CHNS 401 OR EQUIVALENT

CHNS 410 (IL)

Chinese Through Film (3) This course is designed for students who finish Level Two Chinese or higher and aims to help them develop Chinese proficiency through movies.

Effective: Summer 2013

Prerequisite: CHNS 110 or equivalent

CHNS 411 (IL)

Chinese Written Characters (3) This course aims to establish a solid foundation of students' Chinese orthography and prepare students for continuing study in subsequent Chinese courses.

Effective: Summer 2013

Prerequisite: CHNS 110 or the equivalent

CHNS 421 (IL)

China Beyond China (3) Study of modern and contemporary Chinese culture in its diversity and its intercultural contexts.

Effective: Summer 2011

Prerequisite: 3 credits in literature or other fields relevant to this course

CHNS 422 (IL)

Gender and Sexuality in China (3) Study of gender roles and the imaginary of sexuality in the literary, filmic, and artistic production of modern China.

Effective: Fall 2015

Prerequisite: 3 credits in literature or other fields relevant to this course

CHNS 423 (IL)

The Warrior, the Courtesan and the Ghost in Classical Chinese Novels (3) This course provides an introduction to major classical Chinese novels by focusing on three character types: the warrior, the courtesan, and the ghost.

Effective: Spring 2012

Prerequisite: 3 credits in literature or other fields relevant to this course

CHNS 426 (IL)

The Chinese Rhetorical Tradition (3 per semester/maximum of 6) Study of the rhetorical works in ancient China as well

as multiple facets of modern Chinese rhetoric.

Effective: Summer 2011

Prerequisite: 3 credits in ENGL 015

CHNS 427 (APLNG 427) (IL)

Chinese Language, Culture and Society (3) The study of Chinese language and culture and a perspective on the way of life in contemporary Chinese society.

Effective: Spring 2016

Prerequisite: ASIA 100 or equivalent

CHNS 452 (IL)

Contemporary China: Culture and Trends (3 per semester/maximum of 6) Survey of aspects of the contemporary Chinese-speaking world. Includes readings from Chinese newspapers, magazines, and fiction. Topics may vary each semester.

Effective: Spring 2010

Prerequisite: CHNS 401

CHNS 453 (IL)

Chinese Film (3 per semester/maximum of 6) Selected films and directors representing various aspects of Chinese culture and cinema. Topics may vary each semester. Taught in Chinese.

Effective: Spring 2010

Prerequisite: CHNS 401

CHNS 454 (IL)

Introduction to Classical Chinese (3 per semester/maximum of 6) Basic patterns and structures of Classical Chinese to the first millennium B.C. to the 19th century.

Effective: Spring 2010

Prerequisite: CHNS 401 or equivalent (such as study abroad credit)

CHNS 455 (IL)

Masterpieces of Traditional Chinese Literature (3) Survey of traditional Chinese literature, including poetry, historical narratives, philosophical texts, and drama and novel.

Effective: Spring 2010

Prerequisite: CHNS 401 or equivalent

CHNS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2010

CI ED 401 (EDTHP 401) (IL)

Introduction to Comparative Education (3) Origins, nature, scope, basic literature, and methodology of comparative education. Study of sample topics.

Effective: Fall 2007

Prerequisite: 5th semester standing or higher

CIVCM 211 (CAS 222, AYFCE 211) (GS;US;IL)

Foundations: Civic and Community Engagement (3) Conceptual foundations of public scholarship and orientation to contemporary themes and issues in civic and community engagement.

Effective: Spring 2011

CMLIT 001 (GH;IL)

Introduction to Western Literatures Through the Renaissance (3) Introductory comparative survey of European and American literatures of Ancient through Renaissance periods, considering genre, themes, cultural and literary values.

Effective: Spring 2005

CMLIT 002 (GH;IL)

Introduction to Western Literatures Since the Renaissance (3) Introductory comparative survey of European and American literatures, post-Renaissance through Modern, considering genre, themes, cultural, and literary values.

Effective: Summer 2005

CMLIT 003 (GH;IL)

Introduction to African Literatures (3) Comparative analysis of drama, essay, novel, poetry, and stories from traditional oral forms to contemporary expressions of African literary styles.

Effective: Summer 2005

CMLIT 004 (ASIA 004) (GH;IL)

Introduction to Asian Literatures (3) Comparative interpretations of narrative, drama, lyric, and other writings from East Asia and other regions, viewed as world literature.

Effective: Fall 2010

CMLIT 005 (GH;US;IL)

Introduction to Literatures of the Americas (3) Comparative interpretation of the oral and written literary traditions of North, Central, and South America.

Effective: Summer 2005

CMLIT 006 (PHIL 006) (GH;IL)

Philosophy and Literature in Western Culture (3) Explores fundamental issues of human existence through the traditions of western literature and philosophy.

Effective: Spring 2006

CMLIT 010 (GH;IL)

World Literatures (3) The development of literature around the world--from epic, legend, lyric, etc. in the oral tradition to modern written forms.
Effective: Fall 2015

CMLIT 011 (GH;IL)

The Hero in World Literature (3) The figure of the hero/heroine examined in world literature as a vehicle for expressing social and cultural values.
Effective: Summer 2005

CMLIT 012 (GH;IL)

Introduction to World Drama and Performance (3) The power, ethics, and excitement of drama and related forms of performance literature, presented in a global and comparative context.
Effective: Summer 2010

CMLIT 013 (GH;IL)

Virtual Worlds: Antiquity to the Present (3) Virtual worlds from ancient to postmodern, in a comparative and global context that includes literature, film, and online multiplayer games.
Effective: Summer 2010

CMLIT 083S (GH;IL)

First-Year Seminar in Comparative Literature (3) International topics in literature and culture; each seminar will have a specific topic as announced (see the Comparative Literature Web site).
Effective: Summer 2005

CMLIT 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CMLIT 100 (GH;IL)

Reading Across Cultures (3) Comparative approaches (studying international literary periods, themes, genres, etc.) and principles of literary interpretation introduced through readings representing various cultures.
Effective: Fall 2010

CMLIT 101 (GH;US;IL)

Race, Gender, and Identity in World Literature (3) Identity and race, gender and heritage, centrality and marginality, self and other, as expressed in literary works from around the world.
Effective: Fall 2010

CMLIT 105 (GH;IL)

The Development of Literary Humor (3) Literary humor expressed as satire, comedy, and farce--from ancient times to the present--in an international and multicultural context.
Effective: Summer 2005

CMLIT 106 (GH;IL)

The Arthurian Legend (3) The growth and development of the legend of King Arthur, from medieval Europe to modern Japan.
Effective: Summer 2005

CMLIT 107 (GH;IL)

Exploration, Travel, Migration, and Exile (3) An international selection of journey narratives, from the real to the imaginary; travel narratives as critiques of self and society.
Effective: Spring 2011

CMLIT 108 (GH;IL)

Myths and Mythologies (3) World mythology: myths primarily of non-Western cultures, based on selected areas and traditions around the world.
Effective: Summer 2005

CMLIT 109 (GH;US;IL)

Native American Myths, Legends, and Literatures (3) Myths, legends, and literatures of Native American cultures.
Effective: Spring 2006

CMLIT 110 (J ST 131) (GH;US;IL)

Jewish Literature: An International Perspective (3) Literature of the Jewish tradition in various cultures and contexts, such as Europe, Israel, Islamic countries, and the Americas.
Effective: Spring 2011

CMLIT 111 (GH;IL)

Introduction to Literatures of India (3) Narrative, lyric, religious, oral, and dramatic literature, as well as film from India studied in translation from a global perspective.
Effective: Summer 2005

CMLIT 116 (J ST 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.
Effective: Summer 2015

CMLIT 120 (GH;IL)

The Literature of the Occult (3) Important literary works dealing with witchcraft, demonology, vampirism, ghosts, and related concepts, from biblical times to present.
Effective: Spring 2006

CMLIT 122 (GH;US;IL)

Global Science Fictions (3) A study of the relationships between science, literature, and film, from an international and interdisciplinary perspective.

Effective: Summer 2010

CMLIT 128 (ENGL 128, J ST 128, GER 128) (GH;US;IL)

The Holocaust in Film and Literature (3) Thematic, formal, and historical analysis of filmic and literary representation of the Holocaust.

Effective: Spring 2016

CMLIT 130 (GH;IL)

Banned Books: International and Comparative Perspectives (3) The world of banned books, their history, and their politics, studied comparatively and internationally.

Effective: Summer 2010

CMLIT 131 (GH;IL)

Crime and Detection in World Literature (3) Issues of ethics, truth, justice, and social order as embodied in crime and detective literature, presented in comparative contexts.

Effective: Summer 2010

CMLIT 132 (GH;IL)

Nobel Prize Literature (3) Introduction to Nobel Prize winning literature and the culture of the prize in international and historical context.

Effective: Summer 2010

CMLIT 140 (GH;IL)

Literature and the Other Arts: International and Comparative Perspectives (3) A comparative, international examination of the relationship between literature and non-literary art forms.

Effective: Summer 2010

CMLIT 141 (GH;US;IL)

Religion and Literature (3) Major religious themes as expressed in literary masterpieces; sacred texts from various cultures read as literature.

Effective: Summer 2005

CMLIT 142 (GH;IL)

The Psychology of World Literature (3) A comparative, psychological approach to world literature from the perspectives of writer, narrative, character, and reader.

Effective: Summer 2010

CMLIT 143 (GH;US;IL)

Human Rights and World Literature (3) Human rights violations discussed in tandem with their literary representation, presented in a global and comparative context.

Effective: Summer 2010

CMLIT 153 (GH;IL)

International Cultures: Film and Literature (3) Comparison of narrative techniques employed by literature and film in portraying different cultures, topics may vary each semester.

Effective: Spring 2011

CMLIT 184 (ENGL 184) (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the Nineteenth and Twentieth Century.

Effective: Spring 2006

CMLIT 185 (ENGL 185) (GH;IL)

World Novel (3) Development of the modern novel in the last century (outside the British Isles and the United States); lectures, discussions, readings in translation.

Effective: Spring 2011

CMLIT 189 (ENGL 189) (GH;IL)

Modern Drama (3) Playwrights who set the world's stage for twentieth-century drama; issues that continue to shape the contemporary theatrical world.

Effective: Spring 2011

CMLIT 190 (GH;IL)

Literary and Cultural Theory: An Introduction (3) A comparative introduction to literary and cultural theory, and its impact on the study of literature.

Effective: Summer 2010

CMLIT 191 (GAME 160) (GH;US;IL)

Introduction to Video Game Culture (3) A comparative, international look at the nature and history of video games as cultural artifacts, from Pong to online role-playing.

Effective: Spring 2015

CMLIT 199 (IL)

Foreign Study--Comparative Literature (3-6) Course offered on comparative literary topics as part of a foreign-study program.

Effective: Summer 2005

CMLIT 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CMLIT 399 (IL)

Foreign Study--Comparative Literature (3-6) Special course offered on comparative literary topics as part of a foreign-study program.

Effective: Summer 2005

Prerequisite: third-semester standing

CMLIT 400Y (US;IL)

Senior Seminar in Literary Criticism and Theory (3) Discussions of theories of literature, of literary criticism, and particularly of the distinct methods of comparative study; individual projects.

Effective: Spring 2006

Prerequisite: seventh-semester standing; 18 credits in literature

CMLIT 401Y (IL)

The Western Literary Heritage I (3) Major literary movements and authors in the literature of the Western world from the beginnings through the early Renaissance.

Effective: Spring 2006

Prerequisite: 3 credits in literature or history

CMLIT 402Y (US;IL)

The Western Literary Heritage II (3) Major literary movements and authors in the literature of the Western world from the late Renaissance to the present time.

Effective: Spring 2006

Prerequisite: 3 credits in literature or history

CMLIT 403 (LTNST 403) (US)

Latino/a Literature and Culture (3) Literary and other forms of cultural expression (film, music, art, and theater) are compared across different Latina/o communities.

Effective: Spring 2011

Prerequisite: 3 credits in the humanities or in any LTNST course or 4th-semester proficiency in Spanish

CMLIT 404 (ASIA 404) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan.

Effective: Spring 2011

Prerequisite: 3 credits in literature or related field appropriate to this course

CMLIT 404Y (ASIA 404Y) (IL)

Topics in Studies of Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan, taught with focus on written analysis and interpretation.

Effective: Summer 2013

Prerequisite: 3 credits in literature or related field appropriate to this course

CMLIT 405 (US;IL)

Inter-American Literature (3) This course examines the development of literature in Canada, the United States, Spanish America, the Caribbean area, and Brazil.

Effective: Spring 2006

Prerequisite: 3 credits in literature

CMLIT 406 (IL)

Women and World Literature (3) Literature written by women, especially women from non-Western cultures; the spectrum of genres in which women writers have excelled.

Effective: Spring 2006

Prerequisite: 3 credits in literature or in women's studies

CMLIT 408 (IL)

Heroic Literature (3) Traditional heroes, their traits and adventures; typical themes and examples chosen from the epics and sagas of world literature.

Effective: Spring 2006

Prerequisite: 3 credits in literature or folklore

CMLIT 410 (IL)

Literary Translation: Theory and Practice (3) Emphasizing literary translation, a study of the theoretical and practical problems encountered in the processes of translation, transmission, and interpretation.

Effective: Spring 2011

Prerequisite: 18 credits in a foreign language

CMLIT 415 (GH;US;IL)

World Graphic Novels (3) Critical analyses of form, genre, medium, and discourse of the graphic novel and its historical precedents in an international and comparative context.

Effective: Summer 2010

Prerequisite: 3 credits in literature

CMLIT 422 (IL)

African Drama (3) Traditional and popular drama forms; modern anglophone and francophone drama; nationalism and social criticism in contemporary African drama.

Effective: Spring 2006

CMLIT 423 (IL)

African Novel (3) From traditional oral narratives to modern autobiographical, historical, satirical, sociological, and allegorical forms; novelist as social critic.

Effective: Spring 2006

CMLIT 424 (KOR 424, ASIA 424) (IL)

Transnational Korean Literature (3) Exploration of seminal Korean texts, including poetry, fiction, autobiography, and criticism, from the early twentieth century to the contemporary era.

Effective: Summer 2016

CMLIT 425 (KOR 425, ASIA 425) (IL)

Global Korean Cinema (3) Exploration of Korean cinema from the early twentieth century to the present, with an emphasis on its global/local dynamics.

Effective: Summer 2016

CMLIT 430 (IL)

Global Modernisms (3) A comparative investigation of global Modernisms, with an emphasis on the relations between modernism, modernity, and modernization.

Effective: Summer 2010

Prerequisite: 3 credits in literature

CMLIT 435 (IL)

Cultures of Globalization (3) Cultural and literary effects of the process of globalization, with an emphasis on world literatures and transnationalism.

Effective: Summer 2010

Prerequisite: 3 credits of literature

CMLIT 438 (IL)

Fantastic Worlds: International and Comparative Perspectives (3) A comparative, international study of fantastic worlds in literature and visual culture.

Effective: Summer 2010

Prerequisite: 3 credits in literature

CMLIT 443 (US;IL)

Transatlantic Literature (3 per semester/maximum of 6) Comparative literary and cultural relations across the Atlantic Ocean; may include Europe, Africa, the Americas, and/or the Caribbean.

Effective: Spring 2011

Prerequisite: 3 credits in literature

CMLIT 446 (IL)

Postcolonial Literature and Culture (3) Postcolonial literature and theory in a comparative and international context.

Effective: Summer 2010

Prerequisite: 3 credits in the study of literature

CMLIT 448 (IL)

Literary Cultures of Buddhism (3) Comparative exploration of various Buddhist literary cultures, from the classical Indian subcontinent to modern movements like the Beats and dalit writing.

Effective: Summer 2010

Prerequisite: 3 credits in literature

CMLIT 449 (IL)

Literary Cultures of Islam (3) Comparative discussion of the literary cultures of Islam from the seventh century to the present.

Effective: Summer 2010

Prerequisite: 3 credits in the study of literature

CMLIT 453 (COMM 453) (IL)

Narrative Theory: Film and Literature (3) Comparative study of the aesthetics and techniques of film and literature; close analyses of masters of each art form.

Effective: Fall 2006

Prerequisite: COMM 150 or 3 credits in literature

CMLIT 455 (IL)

Ethics, Justice, and Rights in World Literature (3) Concepts of ethics, justice, and rights, appearing in world literature and/or film.

Effective: Summer 2010

Prerequisite: 3 credits in the study of literature

CMLIT 470 (IL)

The Modern Novel (3) Major novels of Joyce, Proust, Kafka, Thomas Mann, Nabokov, and others; their contributions to the art of the novel.

Effective: Spring 2011

Prerequisite: 3 credits in literature

CMLIT 471 (IL)

Poetry and Poetics (3) Theoretical and practical concepts in the comparative, global history of poetry and/or poetics.

Effective: Summer 2010

Prerequisite: 3 credits in literature

CMLIT 480 (IL)

The International Folktale (3) Traditional tales from various parts of the world: their origin, characteristics, forms; their transmission as oral narrative and written literature.

Effective: Spring 2006

Prerequisite: 3 credits in literature or folklore

CMLIT 486 (IL)

Tragedy (3) Development of tragic drama and its relationship to social background and philosophical theory.

Effective: Spring 2006

CMLIT 487 (IL)

Comedy (3) Development of comic drama and its relationship to social background and philosophical theory.

Effective: Spring 2006

CMLIT 488 (ENGL 488) (IL)

Modern Continental Drama (3) From Ibsen to the drama of today: Strindberg, Chekhov, Hauptmann, Pirandello, Ionesco, Beckett, Genet, and others.

Effective: Spring 2006

Prerequisite: ENGL 015 or ENGL 030

CMLIT 489 (IL)

Contemporary World Fiction (3) A survey of developments in contemporary world fiction in translation.

Effective: Spring 2012

Prerequisite: 3 credits in literature

CMLIT 491 (IL)

Literary Adaptation: International and Comparative Perspectives (3) A comparative, international study of adaptations between literature and other media (film, theater, photography, music).

Effective: Summer 2010

Prerequisite: 3 credits in literature or other fields relevant to this course

CMLIT 499 (IL)

Foreign Study--Comparative Literature (3-6) Advanced courses offered on comparative literary topics as part of a foreign-study program.

Effective: Summer 2005

Prerequisite: 18 credits or equivalent in the appropriate foreign language; 6 credits in literature or related field appropriate to this course

CMPEM 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2010

CMPEM 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2010

CMPEM 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2010

CMPSM 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CMPSM 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2008

CMPSM 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CMPSM 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CNPSY 254 (US)

Understanding Discrimination: An Educational and Employment Perspective (3) Study of the effects of educational and employment discrimination on United States social groups/identities.

Effective: Summer 2011

COMM 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2007

COMM 205 (WMNST 205) (GS;US)

Gender, Diversity and the Media (3) Explores the relationship between media and society through critical analysis of its role in social reality.

Effective: Spring 2015

COMM 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

COMM 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2007

COMM 410 (IL)

International Mass Communications (3) The role of international media in communication among and between nations and peoples.

Effective: Spring 2014

Prerequisite: select 3 credits from the following COMM 100 COMM 110 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 or COMM 370

COMM 419 (US;IL)

World Media Systems (3) Comparative study of modern mass systems and the evolution and structure of specific countries' systems.

Effective: Spring 2014

Prerequisite: COMM 410 ; and select 6 credits in the arts or the humanities

COMM 419H (US;IL)

World Media Systems (3) Comparative study of modern media systems of mass communications in selected foreign countries.

Effective: Spring 2009

Prerequisite: select 6 credits in the arts or the humanities; and 3 credits from the following: COMM 100 COMM 110 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 or COMM 370

COMM 453 (CMLIT 453) (IL)

Narrative Theory: Film and Literature (3) Comparative study of the aesthetics and techniques of film and literature; close analyses of masters of each art form.

Effective: Fall 2006

Prerequisite: COMM 150 or 3 credits in literature

COMM 499 (IL)

Foreign Study--Mass Communications (1-12) Study of mass communication systems and practices in selected foreign countries.

Effective: Summer 2005

Prerequisite: departmental approval

CRIM 113 (CRIMJ 113) (US)

Introduction to Law (3) Introduction to law in society with a focus on criminal law, judicial code, laws of sentencing and corrections, criminal procedure.

Effective: Spring 2008

CRIM 423 (CRIMJ 423, WMNST 423) (US)

Sexual and Domestic Violence (3) Legal, sociological, and psychological perspectives on sexual and domestic violence.

Effective: Spring 2013

Prerequisite: CRIMJ 100 or WMNST 100

CRIM 441 (CRIMJ 441) (US)

Delinquency and Juvenile Justice (3) Course examines delinquency and the juvenile justice system including delinquency's nature, causes, and prevention and the processing of juveniles.

Effective: Spring 2008

Prerequisite: CRIM 100

CRIM 451 (CRIMJ 451) (US)

Race, Crime, and Justice (3) This course focuses on the significance of race, class, and ethnicity to criminal justice processing and criminal offending.

Effective: Spring 2008

Prerequisite: CRIM 100

CRIM 453 (CRIMJ 453, WMNST 453) (US)

Women and the Criminal Justice System (3) This course focuses on the experiences of women as offenders, victims, and professionals in the criminal justice system.

Effective: Spring 2013

Prerequisite: CRIM 100 or WMNST 100

CRIM 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2008

CRIMJ 113 (CRIM 113) (US)

Introduction to Law (3) Introduction to law in society with a focus on criminal law, judicial code, laws of sentencing and corrections, criminal procedure.

Effective: Spring 2008

CRIMJ 159 (HIST 159) (GH;US)

History of the FBI (3) Survey of the FBI's history with special emphasis on civil rights and liberties and bureaucratic development.

Effective: Spring 2014

CRIMJ 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2016

CRIMJ 407 (CRIM 407) (US)

Victimology (3) This course will explore the legal, emotional, and social responses to the process of victimization by offenders and third parties.
Effective: Spring 2008

CRIMJ 423 (WMNST 423, CRIM 423) (US)

Sexual and Domestic Violence (3) Legal, sociological, and psychological perspectives on sexual and domestic violence.
Effective: Spring 2008
Prerequisite: CRIMJ 100

CRIMJ 441 (CRIM 441) (US)

The Juvenile Justice System (3) Historical and contemporary view of the juvenile justice system. Focus on analyzing components of the system, their interactions, processing, and handling of youths.
Effective: Spring 2008
Prerequisite: CRIMJ 100

CRIMJ 451 (CRIM 451) (US)

Race, Crime, and Justice (3) This course focuses on the significance of race, class, and ethnicity to criminal justice processing and criminal offending.
Effective: Spring 2008
Prerequisite: CRIMJ 100

CRIMJ 453 (WMNST 453, CRIM 453) (US)

Women and the Criminal Justice System (3) This course focuses on the experiences of women as offenders, victims, and professionals in the criminal justice system.
Effective: Spring 2013
Prerequisite: CRIMJ 100 or WMNST 100

CRIMJ 499 (IL)

Foreign Studies (6) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2008

CSD 100 (GHA;US)

Preventing Vocal Abuse, Misuse, and Disorders (3) Principles of the voice mechanisms, preventing vocal abuse, and promoting vocal health across the life span.
Effective: Fall 2012

CSD 101 (GHA;US)

Preventing Hearing Loss (1.5) Assessment, intervention, and prevention of hearing loss caused by loud music and recreational and industrial noise.
Effective: Summer 2005

CSD 146 (US;IL)

Introduction to Communication Sciences and Disorders (3) Classification of speech, language, and hearing disorders, diagnostic and treatment procedures; skills and responsibilities of the speech-language pathologist and audiologist.
Effective: Summer 2005

CSD 269 (GS;US;IL)

Deaf Culture (3) Explores the economic, social, psychological, and political aspects of the deaf culture and its interaction with the majority hearing culture.
Effective: Fall 2012

CSD 300 (US;IL)

Developmental Considerations in the Assessment and Treatment of Language Disorders (3) Using a developmental framework to interpret problems in child language acquisition.
Effective: Fall 2010
Prerequisite: CSD 146

CSD 462 (US;IL)

Clinical Bases of Language Disorders (3) Description of pathological language and cognitive development, and principles of assessment and remediation among individuals with communication disorders.
Effective: Fall 2016
Prerequisite: CSD 300

CWC 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CWC 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CWC 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

CWC 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

CWC 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

DANCE 100 (GA;US;IL)

Dance Appreciation (3) Explore dance as a vital, communicative and performing art, reflecting social values and cultural beliefs.

Effective: Fall 2007

DANCE 199 (IL)

Dance Foreign Study (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2014

DANCE 299 (IL)

Dance Foreign Study (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2014

DANCE 399 (IL)

Dance Foreign Study (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2011

DANCE 410 (US;IL)

Dance History (3) Survey of dance history concerning perspectives of culture, race, and gender with a focus on Nineteenth and Twentieth centuries.

Effective: Fall 2014

DANCE 499 (IL)

Dance Foreign Study (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2014

DS 099 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2016

DS 199 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2016

DS 299 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2016

DS 399 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2016

E B F 499 (IL)

Foreign Study (1-15) This course is designed to enable students to study in EBF study abroad programs.

Effective: Spring 2014

E E 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

E E 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

E E 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

E E 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

E R M 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2015

E R M 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2015

E R M 499 (IL)

Foreign Studies (1-12) Supervised student activities on research projects identified on an individual or small-group basis.

Effective: Summer 2005

EARTH 101 (GN;US)

Natural Disasters: Hollywood vs. Reality (3) Analysis of the causes and consequences of natural disasters; comparison of popular media portrayal of disasters with perspective from scientific research.

Effective: Summer 2005

EARTH 105 (AFR 105) (GN;IL)

Environments of Africa: Geology and Climate Change (3) Significant natural features of Africa as related to human endeavor; case studies include the Nile, climate change, and natural resources.

Effective: Spring 2013

EARTH 111 (GN;US)

Water: Science and Society (3) Investigation of water behavior and occurrence, its relevance to life, human activities, politics, and society.

Effective: Summer 2006

ECON 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ECON 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ECON 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ECON 436W (US)

Economics of Discrimination (3) Analysis of the economic characteristics of women and minorities, with examination of race and sex discrimination and related government policies.

Effective: Fall 2007

Prerequisite: ECON 302 or ECON 315

ECON 463 (IL)

Economic Demography (3) Microeconomics of demographic behavior; interrelationships between demographic and economic factors, in developing and industrialized economies; economic welfare and policy implications.

Effective: Spring 2006

Prerequisite: ECON 302 or ECON 304 ; or 9 credits in demography

ECON 470 (IL)

International Trade and Finance (3) Economic analysis of why nations trade, barriers to trade, the international monetary system, and macroeconomic policy in an open economy.

Effective: Spring 2011

Prerequisite: ECON 102 or ECON 104

ECON 473 (IL)

China in the Global Economy: History, Culture, and Society (3) Analysis of China's role in the global economy and the impact on U.S. as well as global business and society.

Effective: Spring 2011

Prerequisite: ECON 102 or ECON 104 or permission of program

ECON 499 (IL)

Foreign Study--Economics (2-6) Study in selected countries of economic institutions and current economic problems.

Effective: Spring 2011

Prerequisite: ECON 102 ECON 104

EDSGN 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

EDSGN 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

EDSGN 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

EDSGN 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

EDTHP 115 (US)

Education in American Society (3) Introduction to the development of educational institutions, with emphasis on historical, philosophical, and sociological forces, and on problems of equity.

Effective: Spring 2006

EDTHP 115A (GS;US)

Competing Rights: Issues in American Education (3) An examination of educational issues relevant to democratic

citizenship; emphasis is on understanding the relationship among politics, schools, and society.
Effective: Spring 2006

EDTHP 115S (GS;US)

Competing Rights: Issues in American Education (3) An examination of educational issues relevant to democratic citizenship; emphasis is on understanding the relationship among politics, schools, and society.
Effective: Spring 2006

EDTHP 115U (GS;US)

Competing Rights: Issues in American Education (3) An examination of educational issues relevant to democratic citizenship; emphasis is on understanding the relationship among politics, schools, and society.
Effective: Fall 2016 Ending: Fall 2016

EDTHP 401 (CI ED 401) (IL)

Introduction to Comparative Education (3) Origins, nature, scope, basic literature, and methodology of comparative education. Study of sample topics.
Effective: Fall 2007

Prerequisite: 5th semester standing or higher

EDTHP 416 (SOC 416) (US)

Sociology of Education (3) The theoretical, conceptual, and descriptive contributions of sociology to education.
Effective: Spring 2006

EDTHP 447 (SOC 447) (US)

Ethnic Minorities and Schools in the United States (3) Analysis of the social and cultural factors which affect educational outcomes among minority pupils, especially Blacks, Hispanics, and Indians.
Effective: Fall 2015

EDUC 199 (IL)

Foreign Studies (1-12) Study of educational topics in a country other than the United States.
Effective: Summer 2007

EDUC 315W (US)

Social and Cultural Factors in Education (3) Critical examination of how different experiences linked to race, ethnicity, religion, gender, and sexual orientation influence education.
Effective: Spring 2011

Prerequisite: admission into Elementary Education Major or Secondary Teacher Certification Program

EDUC 499 (IL)

Foreign Studies (1-12) Study of educational topics in a country other than the United States.
Effective: Summer 2007

Prerequisite: permission of instructor

EGEE 101A (MATSE 101A) (GN;IL)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.
Effective: Fall 2007

EGEE 120 (GS;US;IL)

Oil: International Evolution (3) Survey of the commercial development of the world petroleum industry from various international, historical, business, and cultural perspectives.
Effective: Spring 2006

EGEE 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

EGEE 211 (GS;US)

Social Legacy of Pennsylvania Coal (3) Survey of coal technologies with economic, social, and political impacts discussed with historical, cultural, and international perspectives.
Effective: Summer 2005

EGEE 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

EGEE 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

EGEE 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

EM SC 101 (US;IL)

Resource Wars (3) "Resource Wars" presents an analysis of natural resources and how competition for them shapes national and international cultures and geopolitics.
Effective: Summer 2006

EM SC 150 (S T S 150) (GN;IL)

Out of the Fiery Furnace (3) A history of materials, energy and man, with emphasis on their interrelationships. For

nontechnical students.
Effective: Spring 2006

ENGL 015A (GWS;US)

Rhetoric and Composition (3) Instruction and practice in writing expository prose that shows sensitivity to audience and purpose.

Effective: Summer 2005

Prerequisite: ENGL 004 or satisfactory performance on the English proficiency examination

ENGL 103 (GH;US)

The Great Traditions in American Literature (3) Major works of fiction, drama, and poetry from the colonial to the modern periods expressing enduring issues and values.

Effective: Spring 2013

ENGL 105 (AM ST 105) (GH;US)

American Popular Culture and Folklife (3) Survey of popular culture, folklife, and ethnicity, synthesizing material from such areas as literature, media, entertainment, print, music, and film.

Effective: Fall 2008

ENGL 112 (GH;US)

Pennsylvania Literature (3) An introduction to the literature that has been written by Pennsylvania authors from the colonial era through the present day.

Effective: Summer 2014

ENGL 128 (CMLIT 128, J ST 128, GER 128) (GH;US;IL)

The Holocaust in Film and Literature (3) Thematic, formal, and historical analysis of filmic and literary representation of the Holocaust.

Effective: Spring 2016

ENGL 132 (J ST 132) (GH;US)

Jewish American Literature (3) A historical and thematic survey of Jewish Literature of the United States.

Effective: Fall 2015

ENGL 135 (AM ST 135) (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.

Effective: Fall 2013

ENGL 135S (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.

Effective: Summer 2005

ENGL 139 (AF AM 139) (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.

Effective: Fall 2013

ENGL 139S (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.

Effective: Fall 2006

ENGL 145 (GH;IL)

Modern Irish Literature (3) Irish literature in the twentieth century and beyond; focus on the interplay of political, social, and cultural, forces on literature.

Effective: Spring 2007

ENGL 179 (GH;US)

Exploring the Literature of Food: Current Trends in American Food Writing and Environmentalism (3) Examines historical and contemporary American food literature.

Effective: Spring 2015

ENGL 181A (GH;US)

Adventure Literature: Exploring the Chesapeake Bay (4.5) Examines the interconnection of culture and nature in the Chesapeake Bay region through the literature of the region.

Effective: Summer 2011

ENGL 181B (GH;US)

Adventure Literature: Exploring Cape Cod (4.5) Examines the interconnection of culture and nature on Cape Cod through considerations of texts in various literary genres that have contributed to development of a distinctive regional identity and culture.

Effective: Summer 2011

ENGL 181C (GH;US)

The Beach: Exploring the Literature of the Atlantic Shore (4.5) Examines the interconnection of culture and nature in coastal areas of the Atlantic seaboard.

Effective: Spring 2012

ENGL 181D (GH;US)

Adventure Literature: Exploring the Literature of American Wilderness (3) Examines the history and cultural impact of

wilderness in America.
Effective: Spring 2013

ENGL 182A (GH;US;IL)

Literature and Empire (3) Literature written in English from countries that were once part of European empires, e.g., India, Canada, South Africa, and others.
Effective: Summer 2005

ENGL 182C (GH;IL)

Literature and Empire (3) Literature written in English from countries that were once part of European empires, e.g., India, Canada, South Africa, and others.
Effective: Summer 2005

ENGL 184 (CMLIT 184) (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the nineteenth and twentieth centuries.
Effective: Spring 2006

ENGL 184S (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the nineteenth and twentieth centuries.
Effective: Spring 2006

ENGL 185 (CMLIT 185) (GH;IL)

World Novel (3) Development of the modern novel in the last century (outside the British Isles and the United States); lectures, discussions, readings in translation.
Effective: Spring 2011

ENGL 189 (CMLIT 189) (GH;IL)

Modern Drama (3) Playwrights who set the world's stage for twentieth-century drama; issues that continue to shape the contemporary theatrical world.
Effective: Spring 2011

ENGL 194 (WMNST 194) (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by English, American, and other English-speaking women writers.
Effective: Summer 2005

ENGL 194S (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by English, American, and other English-speaking women writers.
Effective: Summer 2005

ENGL 196 (AM ST 196, AMSTD 196) (GH;US)

Introduction to American Folklore (3) A basic introduction to verbal and nonverbal folklore stressing the basic procedures of collection, classification, and analysis.
Effective: Summer 2005

ENGL 199 (IL)

Foreign Study--English (3-6) Studies in English language and/or literature.
Effective: Summer 2005

ENGL 226 (LTNST 226) (GH;US;IL)

Latina and Latino Border Theories (3) English 226 will constitute a wide-ranging examination of contemporary texts (1960-present) central to the construction of contemporary Latino/a culture.
Effective: Spring 2007

ENGL 227 (WMNST 227) (GH;US;IL)

Introduction to Culture and Sexuality (3) A course addressing the relationships between sexuality, literature, and culture.
Effective: Spring 2013
Prerequisite: ENGL 015 or ENGL 030

ENGL 228 (GH;IL)

Introduction to Disability Studies in the Humanities (3) Provides a humanities-based interdisciplinary introduction to Disability Studies.
Effective: Spring 2013

ENGL 235 (AF AM 235) (US)

From Folk Shouts and Songs to Hip Hop Poetry (3) The origins, forms, and function of the oral folk tradition of African Americans.
Effective: Spring 2015
Prerequisite: ENGL 015 or ENGL 030

ENGL 245 (WMNST 245) (GH;US)

Introduction to Lesbian and Gay Studies (3) An introduction to the study of homosexual identities across a wide range of disciplines and methodologies.
Effective: Spring 2013

ENGL 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ENGL 399 (IL)

Foreign Study--English (3-6) Advanced studies in English language and/or literature.

Effective: Summer 2005

ENGL 426 (LTNST 426) (US)

Chicana and Chicano Cultural Production: Literature, Film, Music (3) An in-depth study of Chicana/Chicano literature, film, and music from the inception of the Chicano Movement (1965-1975) to the present.

Effective: Spring 2007

Prerequisite: 3 credits in English

ENGL 428 (AAS 428) (US)

Asian American Literatures (3 per semester/maximum of 6) A seminar on the literatures and cultures of Asian America, with attention to forms of geographic, historical, and ethnic diversity.

Effective: Summer 2010

ENGL 431 (AM ST 475) (US)

Black American Writers (3 per semester, maximum of 6) A particular genre or historical period in the development of Black American literature.

Effective: Fall 2007

Prerequisite: ENGL 015 or ENGL 030

ENGL 461 (US)

The Vernacular Roots of African American Literature (3) The relationship between oral tradition and literary texts and the double consciousness of African American voice in "print."

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 462 (WMNST 462) (US)

Reading Black, Reading Feminist (3) Female identity and its construction in textual representations of gender, class, color, and cultural difference in English-language literatures.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 463 (US)

African American Autobiography (3) The African American literary quest for identity and its adaptation to Euro-American culture and autobiographies.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 466 (US)

African American Novel I (3) Thematic, structural, and stylistic characteristics of the African American novel from residually oral forms to satiric realism.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 467 (US)

African American Novel II (3) Thematic, stylistic, and structural characteristics of the African American novel from naturalism to modernism and postmodernism.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 468 (US)

African American Poetry (3) African American poetry within the contexts of the black oral tradition and transformed European literary tradition.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 469 (AF AM 469) (US)

Slavery and the Literary Imagination (3) The impact of slavery on the petitions, poetry, slave narratives, autobiographies, and novels of African Americans.

Effective: Fall 2012

Prerequisite: ENGL 015 or ENGL 030

ENGL 486 (IL)

The World Novel in English (3) Studies in the novel, written in English, by writers outside of the United States and Great Britain.

Effective: Fall 2007

Prerequisite: ENGL 002 ; ENGL 015 or ENGL 030

ENGL 488 (CMLIT 488) (IL)

Modern Continental Drama (3) From Ibsen to the drama of today: Strindberg, Chekhov, Hauptmann, Pirandello, Ionesco, Beckett, Genet, and others.

Effective: Spring 2006

Prerequisite: ENGL 015 or ENGL 030

ENGL 490 (WMNST 490) (US;IL)

Women Writers and Their Worlds (3) American and British literature written from the perspective of women.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

ENGL 499 (IL)

Foreign Study--English (3-6) Studies abroad in English language and/or literature.

Effective: Summer 2005

ENGR 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

ENGR 111 (IL)

Introduction to Cross-Cultural Communication for Engineers (1) Introduction to theoretical approaches and practical applications of intercultural communications for engineering students.

Effective: Summer 2013

ENGR 118 (GS;IL)

Impact of Culture on Engineering in China (3) Study of engineering in the context of cultural, historical, societal, political, and environmental considerations to understand the relationship between Chinese culture and engineering projects and policies; brief introduction to the basic engineering principles underlying the engineering projects and their design.

Effective: Summer 2013

Prerequisite: ENGR 111

ENGR 195I (IL)

Engineering International Internship (0.5- 1 per semester/maximum of 4) A supervised work experience in a professionally relevant position in research, industry, government or service sector.

Effective: Fall 2013

ENGR 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

ENGR 295I (IL)

Engineering International Cooperative Education (1) A supervised work experience in research, industry or government relevant to a student's major.

Effective: Spring 2006

ENGR 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

ENGR 320Y (GS;US;IL)

Design for Global Society (3) An interdisciplinary study of the engineering design process and the influence of society and culture on design.

Effective: Spring 2012

Prerequisite: ENGL 202

ENGR 395I (IL)

Engineering International Cooperative Education (1-2 per semester) A supervised work experience in research, industry or government relevant to a student's major.

Effective: Spring 2006

Prerequisite: ENGR 295A or ENGR 295I

ENGR 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

ENGR 408 (US)

Leadership Principles (2) An introduction to an exploration of theories and principles of leadership, supplemented by presentations given by industry and government leaders.

Effective: Spring 2006 Ending: Fall 2016

ENGR 408 (US)

Leadership Principles (3) A project-based exploration of theories and principles of engineering leadership applicable to technical careers.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: 5th semester standing or program approval

ENGR 409 (US)

Leadership in Organizations (3) Development of leadership skills essential for engineers to guide colleagues or an organization in a productive direction.

Effective: Spring 2006

ENGR 495I (IL)

Engineering International Cooperative Education (1-3 per semester/maximum of 3) A supervised work experience in research, industry or government relevant to a student's major.

Effective: Summer 2015

Prerequisite: ENGR 395A or ENGR 395I

ENGR 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

ENNEC 499 (IL)

Foreign Study--Mineral Industries (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

ENVST 299 (IL)

Foreign Studies in Environmental Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

Prerequisite: approval of the program

ENVST 499 (IL)

Foreign Studies in Environmental Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

Prerequisite: 6th semester standing approval of program and 6 credits in ENVST or related disciplines

FD SC 499 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

FIN 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

FIN 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

FIN 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

FIN 456 (IL)

International Capital Markets (3) This course develops understanding of international capital markets by striking a balance between institutional details, theoretical foundation and practical application.

Effective: Spring 2008

Prerequisite: FIN 301

FIN 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

FOR 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2014

FOR 418 (US;IL)

Agroforestry: Science, Design, and Practice (3) Agroforestry integrates trees in agricultural landscapes, and/or agriculture products into forested areas for multiple benefits.

Effective: Summer 2013

FOR 488Y (IL)

Global Forest Conservation (3) Ecological, economic, technological, and political aspects of forested ecosystems in a global context, emphasizing tropical and developing countries.

Effective: Spring 2013

Prerequisite: 3 credits in natural sciences and 3 credits in social and behavioral sciences

FOR 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

FR 083S (GH;IL)

First-Year Seminar in French (3) Critical approaches to the dimensions and directions in French/Francophone literatures and cultures.

Effective: Summer 2005

FR 137 (GH;IL)

Paris: Anatomy of a City (3) Survey of the cultural, artistic, literary, and social life of the city of Paris from Gallo-Roman times to the present.

Effective: Summer 2005

FR 139 (GH;IL)

France and the French-speaking World (3) An introduction to the culture of France and its impact on the world.

Effective: Summer 2005

FR 142 (GH;IL)

French Fiction, Drama, and Film (In English) (3) An introduction, in English, to French and francophone literature and cultural history through film, theater, and literature.

Effective: Spring 2016

FR 199 (IL)

Foreign Study--French (1-12) Intensive postintermediate grammar review, with emphasis on oral skills and vocabulary building.

Effective: Summer 2005

Prerequisite: FR 003

FR 201 (IL)

Oral Communication and Reading Comprehension (3) Emphasis on oral skills and reading for total comprehension.

Effective: Spring 2007

Prerequisite: FR 003 or FR 112

FR 202 (IL)

Grammar and Composition (3) Grammar review and writing of short essays.

Effective: Spring 2006

Prerequisite: FR 003

FR 299 (IL)

Foreign Study--French (3-12) Writing practice at postintermediate level. Cultural readings about French civilization.

Effective: Summer 2005

Prerequisite: FR 199

FR 331 (IL)

French Culture and Civilization I (3) French history and culture from the Middle Ages until the French Revolution.

Effective: Summer 2006

Prerequisite: FR 201 FR 202

FR 332 (IL)

French Culture and Civilization II (3) French history and culture from the French Revolution through the Third Republic.

Effective: Summer 2006

Prerequisite: FR 201 FR 202

FR 351 (IL)

Introduction to French Literature I (3) Introduction to close textual reading and analysis of selected works of French literature from the middle ages to 1789.

Effective: Summer 2013

Prerequisite: FR 201 FR 202

FR 352 (IL)

Introduction to French Literature II (3) Introduction to close textual reading and analysis of selected works of French Literature from 1789 to the present.

Effective: Summer 2013

Prerequisite: FR 201 FR 202

FR 399 (IL)

Foreign Study--French (3-12) Advanced training in the French language skills.

Effective: Summer 2005

Prerequisite: FR 201 FR 202

FR 401 (IL)

Advanced Oral Communication (3) Emphasis on speaking and listening comprehension through discussion of current issues, using journalistic materials.

Effective: Spring 2006

Prerequisite: FR 201 FR 202

FR 402Y (IL)

Advanced Grammar and Writing (3) Advanced study of the structure of the French language. Intensive essay writing.

Effective: Spring 2006

Prerequisite: FR 201 FR 202

FR 409 (IL)

Commercial and Technical Translation (3) Translation from English to French of commercial and technical materials; vocabulary building; writing of abstracts and summaries.

Effective: Spring 2006

Prerequisite: FR 402Y

FR 410 (IL)

French Press (3) Extensive readings of selected french daily and weekly newspapers and magazines, along with newscast viewings.

Effective: Spring 2007

Prerequisite: FR 331 or FR 332

FR 417 (IL)

French Phonology (3) A formal study of the sound pattern of French.

Effective: Spring 2007

Prerequisite: FR 201 FR 202

FR 418 (IL)

French Syntax (3) A formal theory of word order and related issues in French grammar.

Effective: Spring 2006

Prerequisite: FR 201 and FR 202

FR 426Y (IL)

French Literature of the Renaissance (3) Survey of key texts from sixteenth century France, with attention to historical and philosophical currents of French social thought.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 430 (IL)

Contemporary France (3) Study of contemporary French society, politics, and culture from 1870 to the present.

Effective: Summer 2013

FR 436 (IL)

French and Francophone Theater (3) French Theater: From "classical unities: to Contemporary Performances.

Effective: Fall 2015

Prerequisite: FR 351 or FR 352

FR 440 (IL)

Teaching of Romance Languages (3) Theories of second language acquisition. Current classroom practices in the teaching of Romance languages.

Effective: Spring 2006

Prerequisite: 15 credits beyond the elementary level

FR 445Y (IL)

Self and Society in Eighteenth-Century France (3) The changing relationship of the individual to society in pre-Revolutionary France will be explored in texts by major writers.

Effective: Spring 2006

Prerequisite: FR 351 . Prerequisite or concurrent: FR 352

FR 452Y (IL)

Nineteenth-Century French Literature (3) Selected readings in romanticism, realism, and symbolism, including Balzac, Stendhal, Sand, Baudelaire, and others, with emphasis on cultural issues.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 453Y (IL)

La Belle Epoque: Politics, Society, and Culture in France, 1880-1914 (3) Interdisciplinary perspectives on the politics, society, and culture of France, 1880-1914.

Effective: Summer 2013

Prerequisite: FR 351 or FR 352

FR 458 (IL)

African Literature of French Expression (3) Genesis of Franco-African literature in the 1930s; phases of the negritude movement; colonial and national literature.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 460 (IL)

Contemporary French Literature (3) Major authors and movements in French novel, drama, and poetry from Proust to the present.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 470 (IL)

Race and Gender Issues in Literatures in French (3) A critical presentation, taught in French, of changing ideas and values on race and gender in French and Francophone literatures.

Effective: Summer 2005

Prerequisite: FR 351 or FR 352

FR 487 (IL)

Topics in French Film History and Theory I: 1895-1945 (3) Provide background needed to understand the broad outlines of French film history and theory in their first fifty years (1895-1945).

Effective: Spring 2006

Prerequisite: FR 351 and FR 352 or COMM 250

FR 488 (IL)

Topics in French Film History and Theory II: 1945-2002 (3) Provide background needed to understand the broad outlines of French film history and theory in their second half-century (1945-2002).

Effective: Spring 2006

Prerequisite: FR 351 and FR 352 or COMM 250

FR 499 (IL)

Foreign Study--French (3-12) Advanced studies in French language and literature.

Effective: Summer 2005

Prerequisite: FR 201 FR 202

GAME 160 (CMLIT 191) (GH;US;IL)

Introduction to Video Game Culture (3) A comparative, international look at the nature and history of video games as cultural artifacts, from Pong to online role-playing.

Effective: Spring 2015

GD 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2006

GD 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2006

GEOG 001 (GS;IL)

Global Parks and Sustainability (3) Introduction to U.S. and global protected areas, with a focus on historical and emerging trends in conservation, sustainability, and socio-ecological systems.
Effective: Spring 2015

GEOG 020 (GS;US;IL)

Human Geography: An Introduction (3) Spatial perspective on human societies in a modernizing world; regional examples; use of space and environmental resources; elements of geographic planning.
Effective: Summer 2005

GEOG 030 (GS;IL)

Geographic Perspectives on Sustainability and Human-Environment Systems (3) Introduction to theory, methods, history and contemporary issues in global and regional relationships between human activity and the physical environment.
Effective: Spring 2012

GEOG 040 (GS;IL)

World Regional Geography (3) Introduction to the world as an interdependent community built from unique and independent regions and nations.
Effective: Spring 2012

GEOG 120 (GS;US;IL)

Urban Geography: A Global Perspective (3) Introduction to the geography of the world's cities and urban system.
Effective: Spring 2006

GEOG 122 (GH;US)

The American Scene (3) Historical perspectives on the social and cultural forces associated with the production of distinctive American landscapes.
Effective: Spring 2007

GEOG 123 (GS;IL)

Geography of Developing World (3) Patterns of poverty in poor countries; conventional and non-conventional explanations; focus on solutions; case studies of specific regions.
Effective: Spring 2007

GEOG 124 (GS;IL)

Elements of Cultural Geography (3) Locational analysis of changes in non-Western cultures. Problems of plural societies, economic development, population growth, and settlement.
Effective: Summer 2005

GEOG 126 (GS;US;IL)

Economic Geography (3) The geographic location and organization of economic activities and outcomes at global, national, regional, and local scales.
Effective: Spring 2012

GEOG 128 (GS;IL)

Geography of International Affairs (3) Contemporary international affairs in their geographical setting; geographic elements in the development of national power, political groupings, and international disputes.
Effective: Summer 2005

GEOG 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006
Prerequisite: prior approval of program

GEOG 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006
Prerequisite: prior approval of program

GEOG 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2006
Prerequisite: prior approval of program

GEOG 420Y (US;IL)

Comparative Urbanism (3) This course investigates selected urban issues through the lens of comparative urbanism.
Effective: Fall 2011
Prerequisite: GEOG 120 GEOG 160

GEOG 423Y (US)

Historical Geography of North America (3) Exploration, settlement, and changing patterns of human occupancy from the seventeenth century to the 1930s.

Effective: Fall 2011

Prerequisite: GEOG 122 3 additional credits in geography or 6 credits American history

GEOG 424 (US;IL)

Geography of the Global Economy (3) Focus on industrial location theory, factors in industrial location, studies of selected industries and problems of industrial development.

Effective: Spring 2011

Prerequisite: ECON 102 ECON 104 GEOG 126

GEOG 425 (US)

Geography of Race, Class, and Poverty in America (3) This class examines the spatial interactions of race, class and poverty in the United States.

Effective: Fall 2011

Prerequisite: GEOG 126 ; ECON 102 or ECON 104

GEOG 426Y (WMNST 426Y) (US;IL)

Gender Geographies (3) Description and explanation of the links between gender relations and spatial structures.

Effective: Fall 2013

Prerequisite: GEOG 020 or GEOG 126 or GEOG 120 or WMNST 100

GEOG 427 (US;IL)

Urban Historical Geography (3) Study of the development and transformation of the historical urban built environment.

Effective: Spring 2007

Prerequisite: 6 credits in geography humanities or social sciences

GEOG 428 (US)

Political Geography (3) Geographical foundations of political phenomena; significant geographic factors in growth and development of states, boundary problems, population distribution, colonies, and internal and international regional problems.

Effective: Spring 2007

Prerequisite: 6 credits in history or 6 credits in political science

GEOG 428Y (US;IL)

Political Geography (3) Geographical foundations of political phenomena; significant geographic factors in growth and development of states, boundary problems, population distribution, colonies, and internal and international regional problems.

Effective: Spring 2012

Prerequisite: 3 credits human geography (GEOG 020 or 120 or 122 or 123 or 124 or 126 or 128)

GEOG 429 (US;IL)

Geographic Perspectives on Global Urbanization (3) This course reflects critically on a number of issues related to global urbanization, including the culture and political economy of urban space.

Effective: Spring 2012

Prerequisite: GEOG 020 GEOG 126 or GEOG 120

GEOG 435H (IL)

Global Change and Sustainability - Bulgaria (3) Sustainability in the context of climate change, global socioeconomic change and regional transformation in Bulgaria; embedded foreign fieldwork (honors).

Effective: Summer 2008

Prerequisite: sophomore standing or above; departmental permission required

GEOG 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2006

Prerequisite: prior approval of program

GEOG 402Y (IL)

Natural Disasters (3) Case studies of the causes and consequences of natural disasters; analysis of disaster impact in different economic, cultural, and social conditions.

Effective: Summer 2005

Prerequisite: fourth-semester standing

GEOG 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

GER 083S (GH;US;IL)

First-Year Seminar in German (3) Germany's cultural past and present.

Effective: Summer 2005

GER 099 (IL)

Foreign Study--German (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

GER 100 (GH;IL)

German Culture and Civilization (3) Culture and civilization of the German people from the Germanic migrations to the Nazi period. Conducted in English.

Effective: Summer 2005

GER 128 (CMLIT 128, ENGL 128, J ST 128) (GH;US;IL)

The Holocaust in Film and Literature (3) Thematic, formal, and historical analysis of filmic and literary representation of

the Holocaust.

Effective: Spring 2016

GER 143 (RUS 143) (GH;IL)

The Culture of Stalinism and Nazism (3) The culture of Stalinist Russia and Nazi Germany in comparative perspective.

Effective: Summer 2005

GER 157 (GH;US)

Pennsylvania Germans: The Culture of the Sectarians (3) Survey of the religious background, beliefs, social life, customs, education, and culture of the Pennsylvania German sectarians, especially the Amish. Conducted in English.

Effective: Summer 2005

GER 175 (GH;IL)

Germanic Heroic and Medieval Literature in English Translation (3) Germanic heroic and medieval courtly literature from 800 to 1350 focusing on the prevailing cultural, social, and legal conditions.

Effective: Spring 2006

GER 189 (GH;IL)

German Film (3) A survey of German film from its beginnings to the present, with emphasis on historical, political, and cultural contexts.

Effective: Summer 2014

GER 190 (GH;IL)

Twentieth-Century German Literature in English Translation (3) Works of such writers as Boll, Brecht, Durrenmatt, Frisch, Grass, Hesse, Kafka, Mann, Rilke, Weiss, and Wolf.

Effective: Spring 2006

GER 195 (GH;IL)

Modern German Drama and Theatre in English Translation (3) Plays and their stage realization by writers such as Brecht, Durrenmatt, Handke, Hauptmann, Kaiser, Schnitzler, Wedekind, and Weiss.

Effective: Spring 2006

GER 199 (IL)

Foreign Study--German (3-6) Intermediate training in German language skills.

Effective: Summer 2005

Prerequisite: GER 002

GER 200 (GH;IL)

Contemporary German Culture (3) Germany since WWI, its politics, economics, society, arts, and educational system in the international context; conducted in English.

Effective: Summer 2005

GER 201 (IL)

Conversation and Composition (4) Continuation of GER 003; emphasis on reading, writing, and conversational skills; course utilizes short literary selections, a concise novel, videos.

Effective: Fall 2006

Prerequisite: GER 003 or GER 008

GER 208Y (IL)

Business German (4) Intermediate Business German.

Effective: Fall 2006

Prerequisite: GER 003 or GER 008

GER 299 (IL)

Foreign Study--German (3-6) Advanced training in German language skills.

Effective: Summer 2005

GER 301 (IL)

Intermediate Speaking and Listening (3) Intensive practice in spoken German through readings, discussions and video.

Effective: Spring 2012

Prerequisite: GER 201 or GER 208

GER 308Y (IL)

German Business Communication (3) Development of German commerce and industry; extensive practice in the major forms of business communications such as business correspondence.

Effective: Spring 2012

Prerequisite: GER 301 or GER 302W

GER 310 (IL)

Introduction to the Study of German Literature (3) History, methods, and the terminology of literary interpretation and analysis in German.

Effective: Spring 2012

Prerequisite: GER 301 or GER 302W

GER 344 (IL)

Intermediate German Culture (3) An overview of German culture from the Middle Ages to the present. Conducted in German.

Effective: Spring 2012

Prerequisite: GER 301 or GER 302W

GER 399 (IL)

Foreign Study--German (3-12) Advanced studies in German language and/or literature.

Effective: Summer 2005

Prerequisite: GER 201

GER 401Y (IL)

Advanced Composition (3) Intensive practice in writing different text types in German.

Effective: Spring 2012

Prerequisite: GER 301 and GER 302W

GER 408 (IL)

Advanced German Business Communications (3) Study of German business organization, forms of business communications, business terminology; writing of reports and abstracts.

Effective: Spring 2006

Prerequisite: GER 308

GER 412 (IL)

Contrastive Analysis of Modern German and English (3) Structural comparison of the German and English grammatical systems: morphology, syntax, phonology.

Effective: Spring 2006

Prerequisite: or concurrent: GER 401

GER 420 (IL)

Genre (3-9) Special studies in a particular literary genre in German literature, such as lyrical poetry, drama, or narrative prose.

Effective: Spring 2006

Prerequisite: GER 310 GER 401

GER 430 (IL)

History of the German Language (3) Development of German from its earliest stages, including historical and cultural aspects.

Effective: Fall 2007

Prerequisite: or concurrent: GER 401Y

GER 431 (IL)

History of German Literature and Culture I (3) Significant works of German literature before the mid-eighteenth century considered in their cultural context.

Effective: Spring 2006

Prerequisite: GER 310 . Prerequisite or concurrent: GER 401

GER 432 (IL)

History of German Literature and Culture II (3) Significant works of German literature from the mid-eighteenth century to the present considered in their cultural context.

Effective: Spring 2006

Prerequisite: GER 310 . Prerequisite or concurrent: GER 401

GER 440 (IL)

Seminar in German Culture (3-6) Seminar devoted to a special topic in the field of German culture and civilization.

Effective: Spring 2006

Prerequisite: or concurrent: GER 401

GER 472 (IL)

Romanticism (3) A study of both early and late romanticism, including such writers as Novalis, the Schlegels, E.T.A. Hoffmann, and Heine.

Effective: Spring 2006

Prerequisite: or concurrent: GER 431 or GER 432

GER 499 (IL)

Foreign Study--German (3-12) Advanced studies in German language, literature, and culture.

Effective: Summer 2005

Prerequisite: any 300-level course in German

GLIS 101 (GS;IL)

Globalization (3) This course provides a broad introduction to the topic of global studies.

Effective: Summer 2015

GLIS 102 (GH;IL)

Global Pathways (3) Five pathways to thinking globally: Health & Environment, Culture & Identity, Human Rights, Wealth & Inequality, and Global Conflict.

Effective: Summer 2015

GLIS 310 (AFR 310, APLNG 310) (IL)

Language Rights, Policy, and Planning (3) This is a course on language rights, policy, and planning from individual, group, inter-ethnic, and national perspectives.

Effective: Summer 2016

GLIS 400Y (IL)

Seminar in Global and International Studies (3) An upper-division capstone seminar focusing critical themes in Global and International Studies with a focus on the writing of a senior thesis for the Global Studies Major.

Effective: Spring 2016

Prerequisite: GLIS 101 GLIS 102

GREEK 099 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

GREEK 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

GREEK 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

GREEK 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

GREEK 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

H P A 401 (IL)

Comparative Health Systems (3) Comparative analysis of health services in selected developed and developing countries.
Effective: Spring 2016
Prerequisite: H P A 301W

H P A 440 (BB H 440) (US;IL)

Principles of Epidemiology (3) Theory of epidemiology and significant case studies. Potential application to health care.
Effective: Fall 2008
Prerequisite: BB H 101 or BIOL 110 or H P A 310 ; STAT 200 or STAT 250

H&HD 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

H&HD 499H (IL)

Foreign Studies-Honors (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

HD FS 250 (WMNST 250) (US)

Sexual Identity over the Life Span (3) Concepts of affectional and sexual orientation over life span, with emphasis on lesbian and gay male personal, family, and community adaptation.
Effective: Summer 2005
Prerequisite: 3 credits in HD FS or 3 credits in social or behavioral sciences

HD FS 287W (GS;US)

Intercultural Community-Building (3) An experiential introduction to negotiating differences in small groups, families, institutions, and communities.
Effective: Summer 2005

HD FS 287Y (GS;US)

Intercultural Community-Building (3) An experiential introduction to negotiating differences in small groups, families, institutions, and communities.
Effective: Summer 2005

HD FS 315 (US)

Family Development (3) Family functions over the life course; family from a multidisciplinary perspective, emphasizing adaptation and change.
Effective: Summer 2005
Prerequisite: HD FS 129 ; 3 credits of social behavioral or human biological sciences

HD FS 315Y (US)

Family Development (3) Family functions over the life course; family from a multidisciplinary perspective, emphasizing adaptation and change.
Effective: Summer 2005
Prerequisite: HD FS 129 ; 3 credits of social behavioral or human biological sciences

HD FS 405 (US)

Gender and Social Development (3) A review of gender-related patterns of social development over the lifespan, as influenced by biological, sociological, and psychological factors.
Effective: Spring 2006
Prerequisite: HD FS 129 HD FS 312W ; or 6 credits in social sciences

HD FS 416 (SOC 411) (US)

Racial and Ethnic Diversity and the American Family (3) This course will explore the nature and determinants of racial and ethnic variation in family processes in the United States.
Effective: Spring 2005
Prerequisite: 3 credits in sociology

HD FS 417 (US;IL)

Biocultural Studies of Family Organization (3) Study of variability in family organization with an emphasis on cultural and economic factors influencing household organization and family roles.

Effective: Spring 2006

Prerequisite: HD FS 129 ; HD FS 312W ; HD FS 315 or HD FS 315W ; or 6 credits in sociology or anthropology

HD FS 424 (US)

Family Development in an Economic Context (3) Economic conditions influencing family functioning; familial effects on the economy; strategies to enhance work-family relations.

Effective: Spring 2006

Prerequisite: HD FS 312W ; HD FS 315 or HD FS 315W

HD FS 425 (US)

Work as a Context for Human Development (3) Theory and research on role of work in adult development; interrelationships between work and family; workplace interventions to enhance development.

Effective: Spring 2006

Prerequisite: HD FS 312W ; 3 credits in social and behavioral sciences

HD FS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2007

HEBR 010 (J ST 010) (GH;IL)

Jewish Civilization (3) Life of the Jewish people from Biblical times, emphasizing cultural, religious, and institutional developments.

Effective: Summer 2005

HEBR 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 199 (IL)

Foreign Study--Basic Hebrew (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 399 (IL)

Foreign Study--Intermediate Hebrew (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HEBR 499 (IL)

Foreign Study--Advanced Hebrew (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HIST 001 (GH;IL)

The Western Heritage I (3) A survey of the Western heritage from the ancient Mediterranean world to the dawn of modern Europe.

Effective: Spring 2006

HIST 001T (GH;IL)

The Western Heritage I (3) A survey of the Western heritage from the ancient Mediterranean world to the dawn of modern Europe.

Effective: Spring 2006

HIST 002 (GH;IL)

The Western Heritage II (3) A survey of the Western heritage from the dawn of modern Europe in the seventeenth century to the present.

Effective: Spring 2006

HIST 003 (GH;US)

The American Nation: Historical Perspectives (3) American history from discovery to the present, focusing on both racial, ethnic, and religious differences and shared traditions and ideals.

Effective: Fall 2014

HIST 005 (CAMS 005) (GH;IL)

Ancient Mediterranean Civilizations (3) Survey of the history and cultures of ancient Mediterranean civilizations in Mesopotamia, Egypt, Syro-Levant, Anatolia, Greece, and Rome.

Effective: Spring 2008

HIST 010 (GH;IL)

World History I (3) Human origins; early civilizations; major political and intellectual developments on all continents; cultural interrelationships to 1500.

Effective: Summer 2005

HIST 011 (GH;IL)

World History II (3) Social, economic, and political evolution of societies and cultures from 1500 to the present.

Effective: Summer 2005

HIST 012 (GH;US)

History of Pennsylvania (3) Chronological and topical survey, emphasizing immigration of diverse ethnic groups and religious, political, economic, and social developments, including industrialization and urbanization.

Effective: Spring 2006

HIST 020 (GH;US)

American Civilization to 1877 (3) An historical survey of the American experience from its colonial beginnings through the Civil War and Reconstruction.

Effective: Spring 2006

HIST 020Y (GH;US)

American Civilization to 1877 (3) An historical survey of the American experience from its colonial beginnings through the Civil War and Reconstruction.

Effective: Spring 2006

HIST 021 (GH;US)

American Civilization Since 1877 (3) An historical survey of the American experience from the emergence of urban-industrial society in the late nineteenth century to the present.

Effective: Spring 2006

HIST 021Y (GH;US)

American Civilization Since 1877 (3) An historical survey of the American experience from the emergence of urban-industrial society in the late nineteenth century to the present.

Effective: Spring 2006

HIST 066 (GH;IL)

Survey of British History (3) The British Isles and their peoples since the ancient period, emphasizing political, cultural, and intellectual developments and imperial rise and fall.

Effective: Summer 2012

HIST 100 (CAMS 100) (GH;IL)

Ancient Greece (3) Greek world from the earliest Aegean cultures to the death of Alexander the Great and the beginnings of Hellenistic civilization.

Effective: Spring 2006

HIST 101 (CAMS 101) (GH;IL)

The Roman Republic and Empire (3) History of the Roman Republic and Empire from the origins of Rome to the disintegration of the Empire.

Effective: Spring 2006

HIST 102 (CAMS 102, J ST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

HIST 103 (GH;IL)

The History of Madness, Mental Illness, and Psychiatry (3) This course will examine the ideas that have shaped European and American perceptions of madness, insanity, and mental illness.

Effective: Summer 2005

HIST 105 (GH;IL)

The Byzantine Empire (3) Development of Byzantine civilization from the decline of the Roman Empire to the fall of Constantinople.

Effective: Spring 2006

HIST 107 (MEDVL 107) (GH;IL)

Medieval Europe (3) Rise and development of the civilization of medieval Europe from the decline of Rome to 1500.

Effective: Spring 2006

HIST 108 (GH;IL)

The Crusades: Holy War in the Middle Ages (3) The social and political history of medieval religious warfare in Europe and in the Middle East.

Effective: Spring 2006

HIST 109 (GH;US)

Introduction to U.S. Environmental History (3) An introduction to the changing relationships between human beings and the natural world in American history.

Effective: Fall 2016

HIST 110 (GH;IL)

Nature and History (3) A broad introduction to the history of human relationships with nature throughout the world.

Effective: Summer 2005

HIST 111 (NUTR 111) (GH;US)

American Food System: History, Technology, and Culture (3) A cultural analysis of the evolution of U.S. agricultural production and food consumption patterns, the food industry and food marketing.

Effective: Fall 2013

HIST 112 (US)

Introduction to U.S. Environmental History (3) An introduction to the changing relationships between human beings and the natural world in American history.

Effective: Fall 2016

HIST 113 (IL)

Baseball in Comparative History (3) Comparative survey of baseball history from its beginnings to the present.
Effective: Fall 2009

HIST 115 (J ST 115, RL ST 115) (GH;US)

The American Jewish Experience (3) Examination of the history, culture, social tensions, and contributions of Jews and Judaism in America.
Effective: Fall 2015

HIST 116 (WMNST 116) (GS;US;IL)

Family and Sex Roles in Modern History (3) Historical perspectives on the Western family since 1500: gender roles, marriage, sexuality, child rearing, and old age; emphasis on United States.
Effective: Spring 2006

HIST 117 (WMNST 117) (GH;US;IL)

Women in Modern History (3) Modernization and women: changing images and roles since mid-eighteenth century in the family, workshop, politics, society; cross-cultural comparisons.
Effective: Summer 2005

HIST 118 (J ST 118) (US;IL)

Modern Jewish History (3) Jewish social and political history from 1492 to the present.
Effective: Fall 2015

HIST 119 (GH;IL)

Gender and History (3) Survey of the development of gender roles in Western societies from the prehistoric era to the early modern period.
Effective: Spring 2008

HIST 120 (GS;IL)

Europe Since 1848 (3) Political, social, and ideological developments; origin and impact of two World Wars; totalitarianism and democracy; changing role in the world.
Effective: Spring 2006

HIST 121 (J ST 121) (GH;IL)

History of the Holocaust 1933-1945 (3) Historical analysis of holocaust themes.
Effective: Summer 2005

HIST 124 (S T S 124) (GH;US;IL)

History of Western Medicine (3) This course explores the history of health, illness, and medicine in western society.
Effective: Summer 2008

HIST 127 (LTNST 127) (US)

Introduction to U.S. Latina/o History (3) This course introduces students to the history of U.S. Latina/os, including Puerto Ricans, Dominicans, Chicanos, Cubans, and Central Americans.
Effective: Spring 2008

HIST 130 (GH;US)

Introduction to the Civil War Era, 1848 through 1877 (3) Survey of causes and consequences of American Civil War, end of Mexican War in 1848 through end of Reconstruction, 1877.
Effective: Spring 2010

HIST 134 (GH;IL)

Introduction to the British Isles, 1400-1800 (3) Survey of the history and cultures of the British Isles from 1400 to 1800.
Effective: Spring 2010

HIST 140 (J ST 140) (GH;IL)

The Israel-Palestine Conflict (3) Roots of the Israel-Palestine conflict; relations between Arabs and Jews in the Middle East from 19th century to present.
Effective: Fall 2016

HIST 141 (GH;IL)

Medieval and Modern Russia (3) Introductory survey, including political, social, economic, and cultural development of Kievan, Muscovite, and Imperial Russia.
Effective: Spring 2006

HIST 142 (GS;IL)

History of Communism (3) Marxism; Leninism and evolution of the Soviet Union; formation and development of the Communist bloc; impact of Chinese Communism.
Effective: Spring 2006

HIST 143 (J ST 143) (GH;IL)

History of Fascism and Nazism (3) The study of right-wing totalitarianism in the twentieth century, with special emphasis on Fascist Italy and Nazi Germany.
Effective: Fall 2015

HIST 144 (GH;US;IL)

The World at War: 1939-1945 (3) In-depth study of the origins and conduct of World War II. Political and economic aspects as well as military.
Effective: Spring 2006

HIST 150 (GH;US)

America in the 1960s: An Introduction (3) An introduction to the history of the United States in the 1960s.
Effective: Summer 2015

HIST 151 (S T S 151) (GS;US)

Technology and Society in American History (3) Development of technology in America from colonial times; its reception and its influence on social, economic, and political life.
Effective: Spring 2006

HIST 152 (AF AM 152) (GH;US;IL)

African American History (3) African roots; colonial and revolutionary experiences; slavery and abolitionism; civil war and reconstruction; accommodation and protest; the new militancy.
Effective: Fall 2013

HIST 153 (GH;US)

The Indian in North America (3) A survey of the American Indian from prehistory to the present.
Effective: Summer 2005

HIST 153Y (GH;US)

The Indian in North America (3) A survey of the American Indian from prehistory to the present.
Effective: Summer 2005

HIST 154 (GH;US)

History of Welfare and Poverty in the United States (3) History of care of the impoverished (emphasis on gender, race, nationality, age of poor, and welfare givers), 18th century to present.
Effective: Summer 2005

HIST 155 (GH;US)

American Business History (3) Major developments in the history of business and industry from the colonial period to the present.
Effective: Spring 2006

HIST 156 (US)

History of the American Worker (3) A study of the American worker from the preindustrial era to the present.
Effective: Spring 2006

HIST 158 (US;IL)

History of American Immigration (3) The waves of migration to America and an analysis of the resulting minority groups, their reception, assimilation, and persisting identity.
Effective: Spring 2006

HIST 159 (CRIMJ 159) (GH;US)

History of the FBI (3) Survey of the FBI's history with special emphasis on civil rights and liberties and bureaucratic development.
Effective: Spring 2014

HIST 160 (US)

American Naval History (3) Introduction to the role of the United States Navy in the defense, diplomacy, commerce, and scientific development of the nation.
Effective: Spring 2006

HIST 161 (US)

The Battle of Gettysburg in American Historical Memory (3) Examines factors shaping understanding of the Civil War's decisive battle and its meanings as a national symbol.
Effective: Spring 2006

HIST 165 (ARAB 165, RL ST 165) (IL)

Introduction to Islamic Civilization (3) Islamic history, culture, and religious life c.600-1500 C.E.
Effective: Spring 2006

HIST 166 (WMNST 166) (GH;US)

History of Sexuality (3) Discusses the ideas, practices, and identities surrounding sexuality over several centuries in a variety of contexts, focusing primarily on the US.
Effective: Summer 2012
Prerequisite: one introductory level course in History or Women's Studies

HIST 171 (ASIA 171) (GH;IL)

Introduction to South Asian History 2: Early Modern to Contemporary (3) An introduction to South Asian history from early modern to contemporary times.
Effective: Spring 2015

HIST 172 (ASIA 172, JAPNS 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.
Effective: Fall 2016

HIST 173 (GH;IL)

Vietnam in War and Peace (3) Rise of nationalism and communism; origins of conflict; United States involvement; impact on postwar regional and international politics; contemporary Vietnam.
Effective: Spring 2006

HIST 174 (ASIA 174) (GH;IL)

The History of Traditional East Asia (3) Comparative cultural, institutional, and social history of traditional China and Japan to their contact with the industrialized West.
Effective: Fall 2016

HIST 175 (ASIA 175) (GH;IL)

The History of Modern East Asia (3) Survey of modern East Asian history and civilizations, from the nineteenth century to roughly the present day.
Effective: Fall 2016

HIST 176 (GH;IL)

Survey of Indian History (3) Survey of cultural, institutional, and political history from ancient times to the present.
Effective: Summer 2005

HIST 177 (ASIA 177) (GH;IL)

The Rise of Modern Southeast Asia (3) Study of Southeast Asia from the rise of early empires to the present.
Effective: Summer 2014

HIST 178 (GH;IL)

Latin-American History to 1820 (3) Conquest of the New World, development of colonial institutions, impact on native cultures, and origins of independence movements.
Effective: Summer 2005

HIST 179 (GH;IL)

Latin-American History Since 1820 (3) Origin, political growth, international relations, and economic status of the Latin-American republics, with emphasis upon present-day conditions.
Effective: Summer 2005

HIST 180 (CAMS 180) (GH;IL)

Ancient Warfare (3) Historical survey of the evolution of warfare in the ancient Mediterranean region from prehistoric times to the Later Roman Empire.
Effective: Summer 2006

HIST 181 (J ST 181) (GH;IL)

Introduction to the Middle East (3) Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918.
Effective: Fall 2015

HIST 182 (ASIA 182) (GH;IL)

Asian Trade: Economy, Industrialization and Capitalism in Asia (3) An historical overview of economy, industrialization, globalization and capitalism in Asia from the 16th century to present.
Effective: Summer 2014

HIST 183 (ASIA 183) (GH;IL)

Gender, Family, and Society in East Asia (3) Investigates the history of gender, family, love, and sex in East Asia.
Effective: Summer 2012

HIST 184 (ASIA 184) (GH;IL)

Society and Culture in the Pacific War (3) Examines the role of society and culture in the Pacific War's causes, contexts, realities, and aftermath.
Effective: Summer 2012

HIST 185 (ASIA 185) (GH;IL)

Asian Pop: The History of Popular Culture in Asia (3) A history of popular culture from the early modern period to the present.
Effective: Summer 2014

HIST 186 (ASIA 186) (IL)

The Silk Roads (3) A survey of the Silk Roads and maritime routes connecting premodern Europe and Asia, and the cultures that flourished along them.
Effective: Spring 2016

HIST 188 (ASIA 188) (GH;IL)

Tibet: People, Places and Space (3) This course examines the historical, cultural, and ethnic dimensions of Tibet from the seventh century to the present.
Effective: Summer 2012

HIST 189 (ASIA 189) (GH;IL)

Illicit Asia: An Alternative Introduction to Asia (3) A historical introduction to unlawful, illegitimate and forbidden ideas, goods people and places in modern Asia.
Effective: Summer 2014

HIST 190 (J ST 190, RL ST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.
Effective: Summer 2015

HIST 191 (AFR 191) (GH;IL)

Early African History (3) Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750.
Effective: Fall 2012

HIST 192 (AFR 192) (GH;IL)

Modern African History (3) Impact of the slave trade, expansion of Islam, colonial conquest, social and cultural transformations, resistance, nationalism, and independence.
Effective: Fall 2012

HIST 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

HIST 200 (US)

American Local History (3 per semester/maximum of 6) Topics in American local history relating local to national developments and studying the historical method by using primary source material.

Effective: Spring 2006

Prerequisite: HIST 020 or HIST 021

HIST 203Y (GH;US;IL)

History of Monsters, Aliens & The Supernatural (3) This course explores the history of the preoccupation with monsters, aliens, and the supernatural.

Effective: Summer 2015

HIST 205 (J ST 205) (GH;US)

American Antisemitism (3) The Phenomenon of antisemitism in American history from Peter Stuyvesant to the present.

Effective: Summer 2011

HIST 210 (AF AM 210) (GH;US)

Freedom's First Generation: African American Life and Work, 1865 to World War II (3) The course will explore the context and events that shaped African American life over the period 1896-1932.

Effective: Spring 2015

Prerequisite: AF AM 100 three credits of American history or permission of the instructor

HIST 211 (AF AM 211) (GH;US;IL)

Slavery and Freedom in the Black Atlantic (3) The course will explore the history and role of African and African-descent people in Africa, the Americas, and Europe.

Effective: Spring 2015

Prerequisite: AF AM 100 or HIST 003 or HIST 020 or HIST 021 or HIST 152

HIST 213Y (AF AM 213Y, WMNST 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.

Effective: Spring 2015

HIST 220 (J ST 220) (GH;IL)

Global Diaspora and Exile (3) Introduction to and survey of the Jewish and other Diasporas around the world.

Effective: Fall 2015

HIST 235 (J ST 235, RL ST 235) (US;IL)

The Church and the Jews (3) Examination of the relationship between Western church and the Jews from the First Century to Enlightenment.

Effective: Spring 2006

HIST 250 (AF AM 250) (GH;IL)

Introduction to the Modern Caribbean (3) A survey course which explores the historical evolution and emergence of the modern Caribbean.

Effective: Fall 2012

HIST 261Y (J ST 261Y) (GH;US;IL)

Ghetto: From Venice to Detroit (3) This course explores why certain groups have been segregated in cities around the world in the last 500 years.

Effective: Spring 2015

HIST 266Y (WMNST 266Y) (GH;US)

Sex and Violence in Nineteenth-Century America (3) Historical Overview of Sex and Violence in the Nineteenth-Century United States.

Effective: Spring 2015

HIST 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

HIST 399 (IL)

Foreign Study--History (1-12) Study in selected foreign countries of various periods and topics in history.

Effective: Summer 2005

HIST 401 (J ST 401) (IL)

Ancient Technologies and Socio-cultural History in the Ancient Levant (3) Social and intellectual development in the Ancient Levant as they affected and were affected by technological development.

Effective: Spring 2006

Prerequisite: RL ST 110

HIST 402 (IL)

The Rise of the Greek Polis (3) Development of the Greek city-state from Homeric times to the fifth century B.C.; special references to Athenian society.

Effective: Spring 2006
Prerequisite: HIST 100

HIST 403 (IL)

Alexander the Great and the Hellenistic World (3) The career of Alexander, his impact on his own time, and the Hellenistic legacy.

Effective: Spring 2006
Prerequisite: HIST 100

HIST 405Y (IL)

The Roman Empire (3) The political and social history of the Roman empire; economic institutions and religious groups which influenced Roman administration.

Effective: Spring 2006
Prerequisite: HIST 001 HIST 101 or 3 credits in classical studies

HIST 407 (IL)

Early Medieval Society (3) Rise of European nations and evolution of their social and political institutions from the time of Constantine to the Crusades.

Effective: Spring 2006
Prerequisite: HIST 107

HIST 408 (IL)

Church and State in the High Middle Ages (3) European political, institutional, and social history in light of church-state tensions from the Crusades to the Renaissance.

Effective: Spring 2006
Prerequisite: HIST 107

HIST 409Y (J ST 409Y, RL ST 407Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.

Effective: Fall 2015

HIST 410 (J ST 410, RL ST 410) (US;IL)

Jews in the Medieval World (3) Trends in medieval Jewish society under Islam and Western Christendom.

Effective: Spring 2006

HIST 411 (MEDVL 411) (IL)

Medieval Britain (3) Political, cultural, and economic history of Britain from circa 400 to 1485 with an emphasis on the kingdom of England.

Effective: Spring 2006
Prerequisite: 6 credits in European history or medieval studies

HIST 412 (IL)

Intellectual History of the Middle Ages (3) Intensive study of selected topics, such as philosophy, mysticism, heresy, the church, literary and artistic expression, and science.

Effective: Spring 2006
Prerequisite: HIST 107

HIST 413 (MEDVL 413) (IL)

Medieval Celtic Studies (3) Celtic civilization from antiquity to the end of the middle ages.

Effective: Spring 2006
Prerequisite: 3 credits in medieval studies or in language literature or European history of the medieval period

HIST 414 (IL)

Renaissance and Reformation (3) The transformation of consciousness from medieval to modern times, with special emphasis on Renaissance Italy and Reformation Germany.

Effective: Spring 2006
Prerequisite: HIST 001

HIST 415 (US;IL)

Race, Gender, and Politics in the United States and South Africa (3) This thematic course will compare key issues, figures, and events in the historical development of the United States and South Africa.

Effective: Spring 2013
Prerequisite: AF AM 100 AF AM 102 AFR 110 AFR 192 or HIST 152

HIST 417 (IL)

The Age of Absolutism (3) Seventeenth- and eighteenth-century royal absolutism in France, Prussia, and Austria; concurrent economic, social, and scientific developments; the Enlightenment.

Effective: Spring 2006
Prerequisite: HIST 001

HIST 418 (IL)

The French Revolution and the Napoleonic Era (3) Development of revolutionary France and the First French Empire and their impact on Europe from 1789 to the Vienna settlement.

Effective: Spring 2006
Prerequisite: HIST 002

HIST 418W (IL)

The French Revolution and the Napoleonic Era (3) Developments of revolutionary France and the First French Empire and their impact on Europe from 1789 to the Vienna settlement.

Effective: Spring 2008

Prerequisite: HIST 002

HIST 419 (US;IL)

The History of Feminist Thought (3) A critical analysis of European and United States feminist thought from the renaissance to the present.

Effective: Spring 2013

Prerequisite: HIST 116 HIST 117 WMNST 100 or WMNST 106

HIST 420 (IL)

Recent European History (3) Impact of two World Wars in twentieth century; social conflict and economic catastrophe; political radicalism; post-1945 recovery and cooperation.

Effective: Spring 2006

Prerequisite: 3 credits in European history

HIST 421 (WMNST 421) (IL)

The History of European Women (3) European women's lives from the Middle Ages to the present.

Effective: Spring 2013

Prerequisite: HIST 116 HIST 117 WMNST 100 or WMNST 106

HIST 422 (RL ST 422) (GH;IL)

Religion and American Culture (3 per semester/maximum of 6) Selected topics, problems, or historical movements in American religion. Relation between religion and American culture.

Effective: Spring 2015

Prerequisite: 3 credits in either history or religious studies

HIST 423 (RL ST 423) (GH;IL)

Orthodox Christianity: History and Interpretations (3) Examines Orthodox Christianity from origins to present using critical historical analysis of primary and secondary sources.

Effective: Spring 2015

Prerequisite: HIST 105

HIST 426 (HIST 426) (IL)

Holocaust (3) This course is an in-depth study of the history of the Holocaust in Europe that puts special emphasis on primary sources.

Effective: Summer 2015

Prerequisite: J ST 010 J ST 121 or by consent of the program

HIST 427 (IL)

Germany Since 1860 (3) Bismarckian power-state; rise to economic dominance; welfare and warfare under Weimar republic and Hitler; post-1945 reconstruction and democracy.

Effective: Spring 2006

Prerequisite: 3 credits in European history

HIST 428 (S T S 428) (IL)

The Darwinian Revolution (3) The origins and implications of evolutionary theory.

Effective: Spring 2006

Prerequisite: an introductory science course and a history course

HIST 430 (IL)

Eastern Europe in Modern Times (3) Influence of geography, economic conditions, and nationalism upon the Eastern European and Balkan peoples; Pan-Slavism, conflicting interests of the great powers.

Effective: Spring 2006

Prerequisite: HIST 001 or HIST 002

HIST 431 (AF AM 431) (US;IL)

Black Liberation and American Foreign Policy (3) This course deals with American foreign policy and Black liberation in Africa since 1945.

Effective: Fall 2012

Prerequisite: 3 credits in African history; 3 credits in African political science; or 3 credits in American political science

HIST 432 (AF AM 432) (IL)

Between Nation and Empire: The Caribbean in the 20th Century (3) An exploration of the political evolution of the Caribbean Region over the course of the 20th Century.

Effective: Fall 2012

Prerequisite: HIST 250

HIST 433 (IL)

Imperial Russia, 1700-1917 (3) Enlightened absolutism, mercantilism, westernization; economic progress, liberal reforms, and revolutionary movement; major intellectual and cultural trends; Russia as great power.

Effective: Spring 2006

Prerequisite: HIST 141

HIST 434 (IL)

History of the Soviet Union (3) Revolution; social, political, economic, and cultural continuity and change in the U.S.S.R. since 1917.

Effective: Spring 2006

Prerequisite: HIST 141 or HIST 142

HIST 436 (IL)

Great Britain Under the Tudors and Stuarts, 1485-1688 (3) Religious, political, and constitutional developments in the

British Isles.
Effective: Spring 2006
Prerequisite: HIST 001 or HIST 002

HIST 437 (IL)
Great Britain 1688-1867 (3) Social, economic, and political history of Great Britain from late Stuart times until the mid-Victorian era.
Effective: Spring 2006
Prerequisite: HIST 001 or HIST 002

HIST 438 (IL)
Great Britain 1867-Present (3) Social, economic, and political history of Great Britain from the mid-Victorian era to the present.
Effective: Spring 2006
Prerequisite: HIST 001 or HIST 002

HIST 440 (US)
Colonial America to 1753 (3) Background, establishment, and growth of the American colonies, including economic, political, social, religious, and intellectual developments.
Effective: Spring 2006
Prerequisite: HIST 020 3 additional credits in history

HIST 441 (US)
Revolutionary America, 1753-1783 (3) Forces in Great Britain and America causing withdrawal of thirteen colonies from the British Empire and the Revolutionary War.
Effective: Spring 2006
Prerequisite: HIST 020 3 additional credits in history

HIST 442 (US)
The Early American Republic, 1783-1850 (3) Confederation and Constitution; the Federalist and Jeffersonian periods; "the Era of Good Feelings"; "the Age of Jackson."
Effective: Spring 2006
Prerequisite: 3 credits in American history

HIST 444 (US)
The United States in Civil War and Reconstruction--1850-1877 (3) Causes of the Civil War; conduct of the war, North and South; impact of the war; problems of Reconstruction.
Effective: Spring 2006
Prerequisite: HIST 130

HIST 444W (US)
The United States in Civil War and Reconstruction--1850-1877 (3) Causes of the Civil War; conduct of the war, North and South; impact of the war; problems of reconstruction.
Effective: Spring 2008
Prerequisite: HIST 130 or HIST 020

HIST 445 (US)
The Emergence of Modern America (3) Economic, social, political history of the United States, 1877-1919, emphasizing growth of industrialism and development as a modern nation.
Effective: Spring 2006
Prerequisite: HIST 021 3 additional credits in history economics or political science

HIST 446 (US)
America Between the Wars (3) The Roaring Twenties, the Great Crash, Depression, and New Deal; war debts, reparations, isolationism, and World War II.
Effective: Spring 2006

HIST 447 (AM ST 447) (US)
Recent American History (3) Contemporary economic, social, and political aspects of the United States and its role as a world power since 1945.
Effective: Spring 2014
Prerequisite: HIST 021 3 additional credits in history economics or political science

HIST 448 (US)
America in the 1960s (3) Social, political, and cultural themes in the United States in the 1960s.
Effective: Spring 2006
Prerequisite: HIST 021

HIST 449 (US)
Constitutional History of the United States to 1877 (3) Colonial background; framing and adoption of the constitution; development of the court under Marshall and Taney; sectionalism, Civil War, Reconstruction.
Effective: Spring 2006
Prerequisite: HIST 020 or HIST 021 3 additional credits in history or political science

HIST 450 (US)
Constitutional History of the United States Since 1877 (3) Constitutional developments from laissez-faire to the welfare state; imperialism, war, internationalism; the contemporary court, civil liberties, and civil rights.
Effective: Spring 2006
Prerequisite: HIST 020 or HIST 021 3 additional credits in history or political science

HIST 451 (US)

The Consumer Revolution (3) The origins and impact of American consumer society since 1870.

Effective: Spring 2006

Prerequisite: three credits in history marketing or advertising

HIST 452 (US;IL)

History of U.S. Foreign Relations (3) History of U.S. foreign relations since 1789; emphasis on twentieth century.

Effective: Spring 2006

Prerequisite: HIST 020 or HIST 021

HIST 454 (US)

American Military History (3) Development of U.S. military policy, 1776 to the present, emphasizing the conduct of our wars, interrelationship of civil and military authority.

Effective: Spring 2006

Prerequisite: HIST 020 or HIST 021

HIST 456Y (US)

The Social History of American Vernacular Building, 1607-1980 (3) Social, historical, and cultural context of American building including settlements, housing, workplaces, stores, recreational facilities; changes over time.

Effective: Spring 2006

Prerequisite: 3 credits in American history

HIST 458Y (LER 458Y) (US)

History of Work in America (3) A study of selected problems in the history of work in the United States, especially since 1877.

Effective: Spring 2008

Prerequisite: HIST 021 HIST 156 or LER 100

HIST 459Y (US)

Social and Cultural History of the United States Since 1783 (3) Role of immigration, social reform movements, religion, education, science, literature, and the arts in American history.

Effective: Spring 2006

HIST 461 (US;IL)

The Emergence of the American City: 1100-1880 (3) The growth of American cities from their urban origins in Europe and the Native-American Southwest to 1880.

Effective: Spring 2006

HIST 462 (US;IL)

The Twentieth Century City (3) Political, economic, social, and cultural transformations in American cities from 1880 to 2000.

Effective: Spring 2006

HIST 463 (US)

American Thought to 1865 (3) Introduction to, scholarly commentary on, major documents of American Intellectual history, early colonial period to end of the Civil War.

Effective: Spring 2006

Prerequisite: any American history course at the college freshman level

HIST 464 (US)

American Thought from 1865 (3) Introduction to, scholarly commentary on, major documents of American Intellectual history from end of the Civil War to the present.

Effective: Spring 2006

Prerequisite: any American history course at the college freshman level

HIST 465 (AF AM 465) (US)

The Post-World War II Civil Rights Movement (3) The civil rights struggle and its impact upon American politics.

Effective: Spring 2015

Prerequisite: AF AM 100 HIST 021 HIST 152 PL SC 001 or PL SC 002

HIST 466 (WMNST 466) (US;IL)

Lesbian and Gay History (3) Critical exploration of the history of sexuality, focusing especially on the emergence of modern lesbian and gay identities.

Effective: Spring 2013

Prerequisite: HIST 117 WMNST 100

HIST 467 (LTNST 467) (US;IL)

Latin America and the United States (3) Historical development of policies of the United States with regard to Latin-American affairs from colonial times to the present.

Effective: Fall 2008

HIST 468 (IL)

Mexico and the Caribbean Nations in the Twentieth Century (3) Political, economic, and social development in Mexico and the Caribbean since 1900. Emphasis on Mexican, Guatemalan, and Cuban revolutions.

Effective: Spring 2016

HIST 471Y (RL ST 471Y) (IL)

Classical Islamic Civilization, 600-1258 (3) Pre-Islamic Arabia; Muhammad; Arab conquests; Islamic beliefs and institutions; literary, artistic, and scientific achievements; relations with Europe; breakdown of unity.

Effective: Fall 2006

HIST 472 (J ST 472) (IL)

The Ottoman Empire and Other Muslim States (3) Turkish and Mongol invasions; Mamluks; Ottoman expansion and institutions; Safavid Persia; disintegration and reform; emergence of modern Turkey and Iran.

Effective: Fall 2015

Prerequisite: HIST 181

HIST 473 (J ST 473) (IL)

The Contemporary Middle East (3) Political, economic, and social changes in Turkey, Iran, Israel, and the Arab countries in the twentieth century; Arab-Israeli conflict.

Effective: Fall 2015

HIST 475Y (ASIA 475Y) (IL)

The Making and Emergence of Modern India (3) India's transition to social, economic, and political modernity through the experience of British colonial rule and the nationalist struggle.

Effective: Spring 2015

Prerequisite: HIST 010 HIST 011 HIST 172 HIST 175 HIST 176 HIST 181 or HIST 191

HIST 476 (ASIA 476) (IL)

Technology & Society in Modern Asia (3) Role of technology in modernization, national identity, and foreign relations of an Asian country from 19th century to present day.

Effective: Summer 2014

Prerequisite: ASIA 100 HIST 172 HIST 173 HIST 174 HIST 175 HIST 176 HIST 183 HIST 184 HIST 188

HIST 479 (IL)

History of Imperialism and Nationalism in Africa (3) Theories and types of imperialism; varied patterns of colonial administration; initial African responses; nationalism; decolonization and independence.

Effective: Spring 2006

Prerequisite: HIST 191

HIST 480 (ASIA 480) (IL)

Japan in the Age of Warriors (3) An overview of Japan the 10th to 17th century, a period of political decentralization, cultural efflorescence, and social change.

Effective: Fall 2014

Prerequisite: HIST 107 HIST 172 HIST 174 or HIST 407

HIST 481 (ASIA 481) (IL)

Modern Japan Since 1800 (3) The transformation of Japan from a relatively isolated, agricultural nation into a highly industrialized world power.

Effective: Fall 2014

Prerequisite: HIST 172 HIST 174 or HIST 175

HIST 483 (ASIA 483) (IL)

Middle China (3) The social, political, and cultural issues and developments from the 8th to 16th century.

Effective: Spring 2015

Prerequisite: HIST 174

HIST 484Y (ASIA 484Y) (IL)

History of Chinese Thought (3) A study of the dynamic historical development of Chinese thought with its diverse expressions from antiquity to the present.

Effective: Fall 2014

Prerequisite: HIST 174 or HIST 175

HIST 485Y (ASIA 485Y) (IL)

China's Last Empire: The Qing Dynasty, 1644-1911 (3) China from 1644 founding of Qing dynasty to 1911 fall; Chinese society and institutions, imperialism and China's internal diversity.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H (Honors in East Asian history)

HIST 486 (ASIA 486) (IL)

China in Revolution (3) China from 1900 to the present; nationalism, cultural change; development of communism.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H (Honors in East Asian History)

HIST 489 (PL SC 486, ASIA 489) (IL)

International Culture in East Asia (3) Study of the role of culture in East Asian regional and East-West international relations.

Effective: Summer 2013

Prerequisite: any one of the following: HIST 172 HIST 174 HIST 175 HIST 480 HIST 481 HIST 483 HIST 484 HIST 485 HIST 486

HIST 491 (IL)

British Civil Wars and Revolutions, 1639-1651 (3) This is an advanced course on the history of the general crisis in the British Isles, from the outbreak of war between England and Scotland in 1639 to the securing of the Commonwealth regime following the destruction of the last major royalist army in 1651.

Effective: Fall 2009

Prerequisite: HIST 002 HIST 134 or HIST 436

HIST 492 (IL)

Witchcraft in Early Modern Europe (3) Survey of the social, economic, political, and religious conditions of accusations and prosecutions of witchcraft in western Europe and north America, from 1500 to 1700.

Effective: Fall 2009

Prerequisite: HIST 002

HIST 493 (ASIA 493) (IL)

Japan in the World (3) Study of Japan's foreign relations and position in the international community from the early 19th century to the present.

Effective: Spring 2015

Prerequisite: ASIA 100 HIST 172 HIST 175 or HIST 481

HIST 499 (IL)

Foreign Study--History (1-6) Study in selected foreign countries of various periods and topics in history.

Effective: Summer 2005

Prerequisite: 3 credits in the appropriate introductory history course for the geographic location specified

HM 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2014

HM 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2014

HM 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2014

HM 365 (IL)

Organizational Behavior in the Hospitality Industry (3) Study of individual satisfaction and performance in hospitality organizations. Topics include cultural diversity, motivation, communication, group behavior, and leadership.

Effective: Fall 2014

Prerequisite: HM 201

HM 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2014

HM 466 (US)

Human Resource Management in the Hospitality Industry (3) Recruitment, selection, training, performance appraisal, and compensation of hospitality human resources in today's culturally diverse work force.

Effective: Fall 2014

Prerequisite: A grade of "C" or better required in HM 201 HM 365

HM 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2014

HORT 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

HORT 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

HUM 150 (GH;IL)

World Mythologies in the Arts (3) Interdisciplinary, cross cultural, historical, and contemporary study of world mythologies as represented in the visual arts, literature, and film.

Effective: Fall 2015

HUM 311 (GH;IL)

The Western Tradition I (3) From prehistory through the Roman world.

Effective: Fall 2015

Prerequisite: fifth-semester standing

HUM 410 (IL)

Religion and Culture (3) A comparative examination of several world religions in their social and cultural contexts.

Effective: Fall 2015

Prerequisite: sixth-semester standing

HUM 461 (IL)

Selected Periods in the Humanities (3) Interdisciplinary studies dealing with selected periods of world culture. (May be repeated for credit.)

Effective: Fall 2016

Prerequisite: fifth-semester standing

HUM 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2015

IB 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2011

I B 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2011

I B 303 (IL)

International Business Operations (3) A survey of the major aspects of international business environment and operations with an emphasis on the cultural dimension.

Effective: Summer 2011

Prerequisite: fifth-semester standing

I B 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2011

I B 440 (PL SC 440, AFR 440) (US;IL)

Globalization and Its Implications (3) This course explores the socioeconomic implications of globalization.

Effective: Spring 2013

Prerequisite: AF AM 100 or AFR 110 or PL SC 003 or PL SC 014 or PL SC 020 or PL SC 022

I B 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2011

I E 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

I E 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

I E 399 (IL)

Foreign Studies--Industrial Engineering (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

I E 499 (IL)

Foreign Studies--Industrial Engineering (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

INART 062 (GA;US;IL)

West African and African American Arts: from the 1960s to the present (3) An introduction to West African and African American Arts from the 1960s to the present.

Effective: Summer 2014

INART 115 (GA;US)

The Popular Arts in America: Popular Music (3) An examination of the roots, development, and significance of popular music in our culture.

Effective: Summer 2013

INART 116 (GA;US)

The Popular Arts in America: The History of Rock and Roll-The 1950s (3) This course examines the roots, development, and significance of rock and roll music in its first decade.

Effective: Summer 2012

INART 125 (GA;US;IL)

The Popular Arts in America: The History of Rock and Roll - Punk Rock (3) An examination of the roots, development, and significance of punk rock in our culture.

Effective: Summer 2012

INART 126 (AF AM 126) (GA;US)

The Popular Arts in America: The History of Rock and Roll - Hip-Hop (3) An examination of the roots, development, and significance of hip-hop in our culture.

Effective: Spring 2014

INART 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

INART 220 (GA;US)

Stand-Up Comedy: A Cultural History (3) An American cultural history from mid-19th through mid-20th Century as seen through the prism of stand-up comedy.

Effective: Summer 2013

Prerequisite: sophomore standing

INART 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

INART 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

INART 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2012

INTAG 100 (GS;IL)

Introduction to International Agriculture (3) Ag in developing countries; contemporary crucial issues in global agriculture; emphasizing hunger and food security.

Effective: Summer 2013

INTAG 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2015

INTAG 299 (IL)

Foreign Studies (1-12 per semester/maximum 12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2016

INTAG 300 (IL)

Agricultural Production and Farming Systems in the Tropics (3) This course focuses on contemporary issues in tropical agriculture and the production of crops, livestock and forestry within tropical agroecosystems.

Effective: Summer 2013

INTAG 399 (IL)

Foreign Studies (1-12 per semester/maximum 12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2016

INTAG 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

INTST 100 (GS;IL)

Introduction to International Studies (3) An introductory multidisciplinary course designed to familiarize students with critical international issues.

Effective: Summer 2005

INTST 100S (GS;IL)

Introduction to International Studies (3) An introductory multidisciplinary course designed to familiarize students with critical international issues.

Effective: Summer 2005

INTST 400 (IL)

Seminar in International Studies (3) An upper-division seminar focusing on one or two critical international issues from an interdisciplinary perspective; individual projects.

Effective: Spring 2007

Prerequisite: INTST 100

IST 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

IST 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2015

IST 235 (WMNST 235) (US)

Gender and the Global Information Technology Sector (3) Integrates information technology and gender studies. Overview issues and socio-cultural shaping of gender in the IT field.

Effective: Summer 2013

IST 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2015

IST 341 (US;IL)

Human Diversity in the Global Information Economy (3) Globalization, human diversity and their impacts on IT products, work, workforce, and the knowledge economy and social inclusion in general.

Effective: Fall 2010

Prerequisite: IST 110

IST 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2015

IST 442 (IL)

Information Technology in an International Context (3) International concepts to improve strategies for the design, dissemination, and use of information technology.

Effective: Summer 2006

Prerequisite: IST 110

IT 083S (GH;IL)

First-Year Seminar in Italian Literature, Film, and Culture (3) Introduction to the study of Italian literature, film, and culture.

Effective: Summer 2005

IT 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

IT 130 (GH;IL)

Italian Culture and Civilization (3) Italian life from antiquity to the present; literature, film, the arts, and contemporary problems in historical perspective.

Effective: Summer 2005

IT 131 (GH;US)

Italian American Culture and Civilization (3) Italian-American experience from the late 19th century to present.

Socio-political issues seen through cinema and through literary and other readings.

Effective: Summer 2005

IT 140 (IL)

Italian Language & Culture for Study Abroad (3) Prepares students for study abroad in Italy through contact with language and customs. Includes pragmatic information and cultural intelligence/sensitivity.

Effective: Summer 2016

IT 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

IT 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

IT 399 (IL)

Foreign Study--Italian (1-12) Advanced training in Italian language skills.

Effective: Summer 2005

Prerequisite: IT 003

J ST 004 (CAMS 004, RL ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationship to culture.

Effective: Summer 2005

J ST 010 (HEBR 010) (GH;IL)

Jewish Civilization (3) Life of the Jewish people from biblical times; emphasizing cultural, religious, and institutional developments.

Effective: Summer 2005

J ST 012 (CAMS 012, RL ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

J ST 060 (ANTH 060, PL SC 060, SOC 060) (GS;IL)

Society and Cultures in Modern Israel (3) An introduction to the society and cultures of the State of Israel from 1948 to the present.

Effective: Summer 2006

J ST 070 (CAMS 070, RL ST 070) (GH;IL)

Prophecy: The Near East Then and Now (3) Prophecy in the ancient Near East, the ancient Jewish and Christian traditions, and today.

Effective: Summer 2007

J ST 083S (GH;IL)

First-Year Seminar in Jewish Studies (3) Critical approaches to the history, sociology, and literature of Jewish Studies.

Effective: Summer 2005

J ST 090 (CAMS 090, RL ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from earliest times (c. 3000 BCE) to present.

Effective: Fall 2015

J ST 102 (CAMS 102, HIST 102, RL ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

J ST 106 (RL ST 106) (GH;IL)

Mysticism and Kabbalah (3) A survey of the history, philosophy, and cultural impact of various mystical traditions in relation to world religions.

Effective: Fall 2015

J ST 110 (CAMS 110, RL ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.

Effective: Summer 2005

J ST 111 (CAMS 111, RL ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.

Effective: Summer 2005

J ST 112 (CAMS 121, RL ST 121) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the context of first century Palestinian Judaism.

Effective: Fall 2015

J ST 113 (CMLIT 113, CAMS 113, RL ST 113) (GH;IL)

Myths and Legends of the Jews (3) Comparative study of diverse interpretations of stories from the Bible in Judaism and Christianity.

Effective: Fall 2016

J ST 114 (RL ST 114) (GH;US;IL)

Modern Judaism (3) Trends in Jewish life and thought since the French revolution; Judaism's responses to the challenge of modernity.

Effective: Summer 2005

J ST 115 (HIST 115, RL ST 115) (GH;US)

The American Jewish Experience (3) Examination of the history, culture, social tensions, and contributions of Jews and Judaism in America.

Effective: Fall 2015

J ST 116 (CMLIT 116) (GH;IL)

Jewish Great Books (3) Historical and cultural survey of key texts of the Jewish Tradition, from The Bible to the present.

Effective: Summer 2015

J ST 118 (HIST 118) (US;IL)

Modern Jewish History (3) Jewish social and political history from 1492 to the present.

Effective: Fall 2015

J ST 121 (HIST 121) (GH;IL)

History of the Holocaust 1933-1945 (3) Historical analysis of holocaust themes.

Effective: Summer 2005

J ST 122 (CAMS 122, RL ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

J ST 123 (CAMS 123, RL ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of the ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

J ST 124 (CAMS 124, RL ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.

Effective: Summer 2005

J ST 128 (CMLIT 128, ENGL 128, GER 128) (GH;US;IL)

The Holocaust in Film and Literature (3) Thematic, formal, and historical analysis of filmic and literary representation of the Holocaust.

Effective: Spring 2016

J ST 131 (CMLIT 110) (GH;US;IL)

Jewish Literature: An International Perspective (3) Literature of the Jewish tradition in various cultures and contexts, such as Europe, Israel, Islamic countries, and the Americas.

Effective: Spring 2011

J ST 132 (ENGL 132) (GH;US)

Jewish American Literature (3) A historical and thematic survey of Jewish Literature of the United States.

Effective: Fall 2015

J ST 135 (PHIL 135, RL ST 135) (GH;IL)

Ethics in Jewish Tradition and Thought (3) Examination of Jewish ethical thought from biblical foundations to the modern period, with attention to contemporary issues in moral philosophy.

Effective: Summer 2015

J ST 137 (RL ST 137, WMNST 137) (GH;US;IL)

Women and Religion (3) Jewish and Christian religious views on womanhood; thought and lives of important religious women; and feminist understandings of these.

Effective: Fall 2012

Prerequisite: third-semester standing

J ST 140 (HIST 140) (GH;IL)

The Israel-Palestine Conflict (3) Roots of the Israel-Palestine conflict; relations between Arabs and Jews in the Middle East from 19th century to present.

Effective: Fall 2016

J ST 143 (HIST 143) (GH;IL)

History of Fascism and Nazism (3) The study of right-wing totalitarianism in the twentieth century, with special emphasis on Fascist Italy and Nazi Germany.

Effective: Fall 2015

J ST 153 (CAMS 153, RL ST 153) (GH;IL)

Dead Sea Scroll (3) Examines the discovery, contents, and interpretations of the Dead Sea Scroll, Jewish texts from approximately 225 B.C.E. to 68 C.E.

Effective: Summer 2014

J ST 160 (CAMS 160, RL ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.

Effective: Summer 2014

J ST 181 (HIST 181) (GH;IL)

Introduction to the Middle East (3) Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918.

Effective: Fall 2015

J ST 190 (HIST 190, RL ST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.

Effective: Summer 2015

J ST 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

J ST 205 (HIST 205) (GH;US)

American Antisemitism (3) The Phenomenon of antisemitism in American history from Peter Stuyvesant to the present.

Effective: Summer 2011

J ST 210 (CAMS 210) (GH;IL)

Numismatics and the Historian (3) Numismatics--the scholarly study of coins and medals--is a major tool in the study of Classical history and archaeology.

Effective: Summer 2012

J ST 220 (HIST 220) (GH;IL)

Global Diaspora and Exile (3) Introduction to and survey of the Jewish and other Diasporas around the world.

Effective: Fall 2015

J ST 235 (HIST 235, RL ST 235) (US;IL)

The Church and the Jews (3) Examination of the relationship between Western church and the Jews from the First Century to Enlightenment.

Effective: Spring 2006

J ST 261Y (HIST 261Y) (GH;US;IL)

Ghetto: From Venice to Detroit (3) This course explores why certain groups have been segregated in cities around the world in the last 500 years.

Effective: Spring 2015

J ST 280 (WMNST 280, RL ST 280) (GH;IL)

Women and Judaism (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.

Effective: Fall 2006

J ST 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

J ST 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

J ST 401 (HIST 401) (IL)

Ancient Technologies and Socio-cultural History in the Ancient Levant (3) Social and intellectual development in the Ancient Levant as they affected and were affected by technological development.

Effective: Spring 2006

Prerequisite: RL ST 110

J ST 405 (RL ST 405) (IL)

Jews and Food (3) Jewish laws, customs and attitudes with regard to food production, agricultural policy and eating from biblical to modern times.

Effective: Spring 2016

Prerequisite: J ST 010 or permission of the program

J ST 409Y (HIST 409Y, RL ST 407Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.

Effective: Summer 2015

J ST 410 (HIST 410, RL ST 410) (US;IL)

Jews in the Medieval World (3) Trends in medieval Jewish society under Islam and Western Christendom.

Effective: Spring 2006

J ST 411 (RL ST 411) (US;IL)

Jewish Studies (3) Study of the life and thought of a particular period or movement in the history of Judaism.

Effective: Spring 2006

Prerequisite: 3 credits in religious studies

J ST 426 (HIST 426) (IL)

Holocaust (3) This course is an in-depth study of the history of the Holocaust in Europe that puts special emphasis on primary sources.

Effective: Summer 2015

Prerequisite: J ST 010 J ST 121 or by consent of the program

J ST 457 (ANTH 457, SOC 457) (US;IL)

Jewish Communities: Identity, Survival, and Transformation in Unexpected Places (3) Examines the global array of smaller Jewish communities that have flourished outside the main urban centers of Jewish settlement.

Effective: Summer 2006

Prerequisite: ANTH 001 or ANTH 045 HEBR 010 J ST 010 SOC 001 SOC 005 SOC 007 SOC 015

J ST 473 (HIST 473) (IL)

The Contemporary Middle East (3) Political, economic, and social changes in Turkey, Iran, Israel, and the Arab countries in the twentieth century; Arab-Israeli conflict.

Effective: Fall 2015

J ST 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

JAPNS 099 (IL)

Foreign Study (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2010

JAPNS 110 (IL)

Level Two Japanese B (4) Intermediate Japanese - Continued study of modern Japanese at intermediate level; extensive audio-lingual practice for conversational fluency; reading/writing original scripts.

Effective: Spring 2011

Prerequisite: JAPNS 003

JAPNS 120 (GH;IL)

Japanese Literature in Its Cultural Context (3) Japanese literature and film from classical through contemporary times, with attention to changing cultural settings. Taught in English.

Effective: Spring 2010

JAPNS 120W (GH;IL)

Japanese Literature in its Cultural Context (3) Japanese Literature in its Cultural Context: Japanese literature and Culture from Classical through contemporary times; writing intensive.

Effective: Summer 2013

JAPNS 121 (GH;IL)

Japanese Film and New Media (3) Survey of Japanese film and new media in the twentieth century and beyond, with attention to changing cultural settings. Taught in English.

Effective: Spring 2010

JAPNS 172 (ASIA 172, HIST 172) (GH;IL)

Survey of Japanese Civilization (3) Survey of social, institutional, cultural, and religious developments from ancient times to the present.

Effective: Fall 2016

JAPNS 199 (IL)

Foreign Study--Basic Japanese (1-8) Small group instruction in spoken and written modern Japanese at the introductory level.

Effective: Spring 2010

JAPNS 299 (IL)

Foreign Study--Intermediate Japanese (1-12) Small group instruction in spoken and written modern Japanese at the intermediate level.

Effective: Spring 2010

Prerequisite: JAPNS 002

JAPNS 399 (IL)

Foreign Study (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2010

JAPNS 401 (IL)

Level Three Japanese A (4) Further acquisition of the four language skills in Japanese--reading, writing, speaking and listening comprehension.

Effective: Spring 2011

Prerequisite: JAPNS 110

JAPNS 402 (IL)

Level Three Japanese B (4) Exclusively for study abroad returnees. To further develop Japanese proficiency in speaking, listening, reading, and writing.

Effective: Spring 2011

Prerequisite: JAPNS 401

JAPNS 403Y (IL)

Level Four Japanese A (4) Continuation of JAPNS 402. Aims to improve students' proficiency in all four language skills, with a special emphasis on writing.

Effective: Fall 2012

Prerequisite: JAPNS 402

JAPNS 404 (IL)

Level Four Japanese B (4) Continuation of JAPNS 403Y. Aims to improve students' proficiency in all four language skills through content-based language learning.

Effective: Fall 2013

Prerequisite: JAPNS 403Y

JAPNS 410 (IL)

Japanese Through Manga (3) The course aims to expand students' knowledge and application of Japanese language beyond elementary and intermediate textbooks through the use of manga (graphic novels).

Effective: Summer 2013

Prerequisite: JAPNS 110 or equivalent

JAPNS 421 (IL)

Courtly Japan (3) Focused study of aristocratic society and culture of Heian period Japan.

Effective: Spring 2012

Prerequisite: JAPNS 120 JAPNS 121 or HIST 172

JAPNS 422 (IL)

War and the Warrior in Japan (3) Survey of the role of warfare and the warrior in Japan, with attention to changing cultural settings. Taught in English.

Effective: Summer 2011

Prerequisite: JAPNS 120 or JAPNS 121 or HIST 172

JAPNS 423 (IL)

Men, Women, and Animals (3) Japanese history and culture through the lens of relations between men and women and between humans and animals.

Effective: Summer 2011

Prerequisite: HIST 172 JAPNS 120 or JAPNS 121

JAPNS 424 (IL)

Traveling Voices (3) Transnational Writings of Japan: from Modern to Contemporary Eras .

Effective: Spring 2012

Prerequisite: JAPNS 120 JAPNS 121 or HIST 172

JAPNS 450 (IL)

Introduction to Classical Japanese (3) Basic patterns and structures of Classical Japanese from its development in the 6th century through usage in the 20th century.

Effective: Summer 2013

Prerequisite: JAPNS 402 or equivalent

JAPNS 452 (IL)

Contemporary Japan: Cultures, Lifestyles, Trends (3 per semester/maximum of 6) Survey of aspects of modern Japanese society; includes readings from Japanese newspapers, magazines, and fiction; topics may vary each semester.

Effective: Spring 2010

Prerequisite: JAPNS 401

JAPNS 453 (IL)

Japanese Film (3 per semester/maximum of 6) Selected films and directors representing various aspects of Japanese culture and cinema; topics may vary each semester.

Effective: Spring 2010

Prerequisite: JAPNS 401

JAPNS 454 (IL)

Japanese Literature (3 per semester/maximum of 6) Selected works from important Japanese texts representing genres such as autobiography, poetry, fiction, and drama; topics may vary each semester.

Effective: Spring 2010

Prerequisite: JAPNS 401

JAPNS 499 (IL)

Foreign Study--Advanced Japanese (1-15) Small group instruction in spoken and written modern Japanese at the advanced level.

Effective: Spring 2010

Prerequisite: JAPNS 110 or JAPNS 299

KINES 141 (US;IL)

The Socio-Cultural Dynamics of Kinesiology (3) Evolution of cultural values in physical activity from antiquity to the present.

Effective: Spring 2014

KINES 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2011

KINES 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2011

KINES 341 (US;IL)

The Historical, Cultural, and Social Dynamics of Sport (3) Connections between sport and broader historical, cultural, social, political, intellectual, and economic contexts.

Effective: Spring 2016

Prerequisite: Students must have a C or better in: KINES 100 or KINES 141

KINES 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2011

KINES 424 (WMNST 424) (US)

Women and Sport (3) An interdisciplinary approach to contemporary issues related to women and sport from historical, physiological, psychological, and sociological perspectives.

Effective: Spring 2013

Prerequisite: PSYCH 100 PSYCH 231 PSYCH 479 SOC 001 or WMNST 100

KINES 441 (AM ST 441) (US)

History of Sport in American Society (3) Background, establishment, and growth of sport in America from colonial times to the present.

Effective: Fall 2007

Prerequisite: KINES 141 or 3 credits of United States history

KINES 442 (CAMS 442) (IL)

Sport in Ancient Greece and Rome (3) An examination of the continuity of sport in ancient Greek and Roman societies.

Effective: Spring 2008

Prerequisite: CAMS 025 CAMS 033 CAMS 140 CAMS 150 CAMS 100 CAMS 101 or KINES 141

KINES 443 (IL)

The Modern Olympic Games (3) An analysis of the modern Olympic Games from their inception through the current festival.

Effective: Spring 2006

Prerequisite: KINES 141 or 3 credits of history or philosophy

KINES 444 (US)

History of Athletics in Higher Education (3) Origin and development of athletics in American higher education from colonial times to the present.

Effective: Spring 2006

Prerequisite: KINES 141 or 3 credits of American history

KINES 446 (IL)

History of Sport in the Modern World (3) History of sport in modern world, ca. A.D. 1500 to present; concentrates on role of sport in societies outside United States.

Effective: Summer 2005

Prerequisite: KINES 141 or 3 credits of non-United States history

KINES 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2011

KOR 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2010

KOR 120 (IL)

Introduction to Korean Culture (3) Survey of Korean culture and society in historical contexts; exploration from antiquity to the contemporary period through diverse media.

Effective: Summer 2016

KOR 121 (IL)

Korean Popular Culture (3) Survey of contemporary Korean popular culture in various forms, including pop music, film, TV drama, advertising, comics, and literature.

Effective: Summer 2016

KOR 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2010

KOR 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

KOR 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

KOR 401 (IL)

Level 3 Korean A (4) KOR 401 is the first semester of third-year Korean, which is equivalent to Advanced-Intermediate Korean I.

Effective: Summer 2014

Prerequisite: KOR 110 or equivalent

KOR 402 (IL)

Level 3 Korean B (4) KOR 402 is the second semester of third-year Korean, which is equivalent to Advanced-Intermediate Korean II.

Effective: Summer 2014

Prerequisite: KOR 401 or equivalent

KOR 424 (CMLIT 424, ASIA 424) (IL)

Transnational Korean Literature (3) Exploration of seminal Korean texts, including poetry, fiction, autobiography, and criticism, from the early twentieth century to the contemporary era.

Effective: Summer 2016

KOR 425 (CMLIT 425, ASIA 425) (IL)

Global Korean Cinema (3) Exploration of Korean cinema from the early twentieth century to the present, with an emphasis on its global/local dynamics.

Effective: Summer 2016

KOR 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2010

L A 199 (IL)

Foreign Study--Liberal Arts (1-9) Study in selected foreign countries of the cultural, institutional, and/or social development of the host country.

Effective: Summer 2005

L A 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

L A 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

L A 499 (IL)

Foreign Study--Liberal Arts (1-9) Study in selected foreign countries of the cultural, institutional, and/or social development of the host country.

Effective: Summer 2005

LANG 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

LANG 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

LANG 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

LANG 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

LANG 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

LARCH 060 (GA;US;IL)

History of Design on the Land (3) A survey of the historical development of outdoor space in relationship to allied arts from early beginnings to this century. Students may take only one course for General Education credit from LARCH 003 GA or 060 GA.

Effective: Fall 2010

LARCH 065 (GA;US;IL)

Built Environment and Culture (3) Investigates the relationship between socio-cultural practices and the development and organization of contemporary built environments.

Effective: Summer 2005

LARCH 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2006

LARCH 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2006

LARCH 331 (IL)

Landscape Architectural Design Implementation I (3) Introduction to landscape construction materials and their use in design; includes principles and techniques for detailed design of site elements. For Landscape Architecture majors only.

Effective: Spring 2012

Prerequisite: LARCH 231

LARCH 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2006

LARCH 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LARCH 499A (IL)

Design Theory Seminar (1) Inquiry-based reading and discussion of design theory literature relevant to the focus and content of the associated design studio course, LARCH 499B. LARCH majors only.

Effective: Spring 2007

Prerequisite: LARCH 361W

LARCH 499B (IL)

Design and Theory VI: Contemporary/International Landscape Architectural Design Issues (5) Study of and design for sites, programs, and social groups associated with ongoing contemporary landscape architectural concerns. LARCH majors only.

Effective: Spring 2012

Prerequisite: LARCH 312 LARCH 361W

LARCH 499D (IL)

Contemporary/International Special Topics (3) Special topics related to, and study in conjunction with 499B. Landscape Architecture majors only.

Effective: Spring 2012

Prerequisite: LARCH 361W

LATIN 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LATIN 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LATIN 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LATIN 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LATIN 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LDT 100 (GS;IL)

World Technologies and Learning (3) This course explores e-learning in international contexts and the impact of these new learning options on cultures.

Effective: Fall 2015

LER 136 (WMNST 136) (US)

Race, Gender, and Employment (3) Employment relations and legislative and policy responses to labor force issues of racial and gender inequality.

Effective: Spring 2008

LER 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2008

LER 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2008

LER 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2008

LER 400 (IL)

Comparative Employment Relations Systems (3) Analysis of structure and elements of employment relations systems in developed and developing areas.

Effective: Spring 2008

Prerequisite: 3 credits in Labor and Employment Relations

LER 403 (IL)

International Human Resource Studies (3) Course exploring human resource management from an international perspective.

Effective: Spring 2015

Prerequisite: LER 100

LER 445Y (AF AM 445Y, PL SC 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

LER 458Y (HIST 458Y) (US)

History of Work in America (3) A study of selected problems in the history of work in the United States, especially since 1877.

Effective: Spring 2008

Prerequisite: HIST 021 HIST 156 or LER 100

LER 466 (US)

Labor Union Structure, Administration and Governance (3) Comprehensive analysis of American Labor Unions/Labor Organizations: how structured, administered, and governed as they pursue economic, social, political objectives.

Effective: Spring 2016

Prerequisite: LER 100

LER 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2008

LING 001 (GS;US;IL)

The Study of Language (3) A non-technical introduction to the study of human language, and its role in human interaction. Students who have successfully completed LING 100 may not enroll in LING 001.

Effective: Summer 2005

LING 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LING 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LING 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LING 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

LTNST 100 (GH;US)

Introduction to Latina/s Studies (3) This course provides an interdisciplinary introduction to the study of Latinas/os in the U.S.

Effective: Fall 2012

LTNST 127 (HIST 127) (US)

Introduction to U.S. Latina/o History (3) This course introduces students to the history of U.S. Latina/os, including Puerto Ricans, Dominicans, Chicanos, Cubans, and Central Americans.

Effective: Fall 2012

LTNST 226 (ENGL 226) (GH;US;IL)

Latina and Latino Border Theories (3) English 226 will constitute a wide-ranging examination of contemporary texts (1960-present) central to the construction of contemporary Latino/a culture.

Effective: Fall 2012

LTNST 300 (WMNST 300) (US)

Latinas in the US: Gender Culture and Society (3) This course examines the historical development, theoretical premises, and political, social, and artistic contributions of Latina feminisms in the United States.

Effective: Spring 2013

Prerequisite: LTNST 100 or WMNST 100

LTNST 315 (SPAN 315) (GH;US)

Spanish and Spanish-speakers in the U.S. (3) In this course, we investigate various aspects of the language(s) and

language behaviors of U.S. Latinos.

Effective: Fall 2012

LTNST 403 (CMLIT 403) (US)

Latina/o Literature and Culture (3) Literary and other forms of cultural expression (film, music, art, and theater) are compared across different Latina/o communities.

Effective: Fall 2012

Prerequisite: 3 credits in the humanities or in any LTNST course or 4th-semester proficiency in Spanish

LTNST 426 (ENGL 426) (US)

Chicana and Chicano Cultural Production: Literature, Film, Music (3) An in-depth study of Chicana/Chicano literature, film, and music from the inception of the Chicano Movement (1965-1975) to the present.

Effective: Fall 2012

Prerequisite: 3 credits in English

LTNST 467 (HIST 467) (US;IL)

Latin America and the United States (3) Historical development of policies of the United States with regard to Latin-American affairs from colonial times to the present.

Effective: Fall 2012

LTNST 479 (LTNST 479) (GH;US)

U.S. Latina/o Culture en Espanol (3) The history, culture, art, and social issues of Latinos in the United States.

Effective: Summer 2014

Prerequisite: SPAN 253W

M E 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2008

M E 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2008

M E 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2008

M E 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2008

MATH 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MATH 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MATH 475W (US;IL)

History of Mathematics (3) A global survey of the history of mathematics as viewed as a human response to cultural, political, economic, and societal pressures.

Effective: Spring 2012

Prerequisite: MATH 315 or MATH 311W

MATH 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MATSE 081 (GN;IL)

Materials in Today's World (3) A survey of the properties, manufacture, and uses of polymers, ceramics and metals in today's world with emphasis on modern developments and new materials.

Effective: Summer 2005

MATSE 101A (EGEE 101A) (GN;IL)

Energy and the Environment (3) Energy utilization and technological development, energy resources, conversion and consequences on the local and global environment, and future energy alternatives.

Effective: Fall 2007

MATSE 404 (BME 444) (IL)

Surfaces and the Biological Response to Materials (3) Focus is on the special properties of surfaces as an important causative and mediating agent in the biological response to materials.

Effective: Spring 2015

Prerequisite: CHEM 112 or MATSE 112

MATSE 484W (IL)

International Internship in Materials: Research Definition and Methodology (3) A course focused on international research, specific design and methodology, facilitated through the International Internship in Materials and Program.

Effective: Summer 2006

Prerequisite: Sixth-semester standing in Materials Science and Engineering; MATSE 201 MATSE 460 MATSE 492W
satisfactory completion of cultural class from Office of Education Abroad

MATSE 485W (IL)

International Internship in Materials: Experimentation and Documentation (3) A course focused on international research, specifically experimentation and documentation, facilitated through the International Internship in Materials Program.

Effective: Summer 2006

Prerequisite: Seventh-semester standing in Materials Science and Engineering; MATSE 484W ; satisfactory completion of cultural class from Office of Education Abroad

MEDVL 107 (HIST 107) (GH;IL)

Medieval Europe (3) Rise and development of the civilization of medieval Europe from the decline of Rome to 1500.

Effective: Spring 2006

MEDVL 108 (GH;IL)

Medieval Civilization (3) An interdisciplinary introduction to literature, art, and thought of the Middle Ages.

Effective: Spring 2006

MEDVL 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MEDVL 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MEDVL 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MEDVL 411 (HIST 411) (IL)

Medieval Britain (3) Political, cultural, and economic history of Britain from circa 400 to 1485 with an emphasis on the kingdom of England.

Effective: Spring 2006

Prerequisite: 6 credits in European history or medieval studies

MEDVL 413 (HIST 413) (IL)

Medieval Celtic Studies (3) Celtic civilization from antiquity to the end of the middle ages.

Effective: Spring 2006

Prerequisite: 3 credits in medieval studies or in language literature or European history of the medieval period

MEDVL 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MGMT 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MGMT 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MGMT 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MGMT 445 (US)

Managing a Diverse Workforce (3) This course focuses on developing knowledge and skills for managing demographic, functional, occupational and identity-based differences within and among organizations.

Effective: Spring 2015

Prerequisite: B A 304 or MGMT 301 ; MGMT 341

MGMT 461 (IL)

International Management (3) Examines issues of nations and cultures including motivation, communication, negotiation, leadership, ethics and social responsibility, and women in management.

Effective: Spring 2008

Prerequisite: B A 304 or MGMT 301

MGMT 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MICRB 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MICRB 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MICRB 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

MIS 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MIS 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MIS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MIS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MKTG 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MKTG 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MKTG 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MKTG 445 (IL)

Global Marketing (3) Role of international marketing in the global environment; political, economic, geographic, historical, cultural conditions; developing and implementing international marketing strategies.

Effective: Spring 2008

Prerequisite: B A 303 or MKTG 301

MKTG 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2007

MUSIC 007 (GA;US)

Evolution of Jazz (3) Study of the origins and development of jazz as an art form.

Effective: Summer 2005

MUSIC 009 (GA;IL)

Introduction to World Musics (3) An overview of the music of India, China, Japan, Indonesia, Africa, and the Middle East.

Effective: Summer 2005

MUSIC 093 (GA;US;IL)

Essence of Joy (1 per semester, maximum of 8) Rehearsal and performance of choral repertoire from the African/American tradition.

Effective: Spring 2006

Prerequisite: audition

MUSIC 162 (IL)

Introduction to Music History (2) An introduction to Western music history and world music of selected cultures through the study of representative works.

Effective: Spring 2006

MUSIC 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

MUSIC 261 (GA;IL)

Survey of Music History I (3) A survey of music history to 1750, with readings, listening, and lecture.

Effective: Spring 2012

Prerequisite: MUSIC 131 MUSIC 162

MUSIC 262 (GA;IL)

Survey of Music History II (3) A survey of music history from 1750 to the present, with readings, listening, and lecture.

Effective: Spring 2012

Prerequisite: MUSIC 132 MUSIC 162

MUSIC 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

MUSIC 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

MUSIC 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2007

NUC E 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2008

NUC E 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2008

NUC E 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2008

NUC E 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2008

NURS 111S (US;IL)

Nursing Roles (4) Introduction to nursing roles/process with emphasis on societal norms and multicultural influences on health care needs.

Effective: Spring 2011

Prerequisite: admission to 2NURS major

NURS 250 (US)

Professional Role Dev I: Intro to Professional Issues in Nursing Practice and Nursing Informatics (2) Introduction to professional nursing practice and health-related issues emphasizing application of nursing informatics.

Effective: Spring 2011

Prerequisite: BIOL 129 BIOL 141

NURS 390 (US)

Transition and the Professional Nursing Role (3) Transition to baccalaureate education and professional nursing practice, emphasizing leadership, management, and issues influencing nursing education and practice.

Effective: Fall 2008 Ending: Fall 2016

Prerequisite: eligibility for NURN major

NURS 390 (US)

Transition and the Professional Nursing Role (3) Transition to baccalaureate education and professional nursing practice, emphasizing leadership, management, and issues influencing nursing education and practice.

Effective: Spring 2017 Future: Spring 2017

NURS 401 (IL)

Concepts of Health (3) Exploration of current and ancient concepts of health and their respective modes of intervention.

Effective: Fall 2008 Ending: Fall 2016

Prerequisite: PSYCH 100 or SOC 001

NURS 401 (IL)

Concepts of Health (3) Exploration of current and ancient concepts of health and their respective modes of intervention.

Effective: Spring 2017 Future: Spring 2017

NURS 402 (US;IL)

Holistic Health (3) Examination of emerging conceptualizations of health and therapy based on a holistic view of human beings.

Effective: Fall 2008 Ending: Fall 2016

Prerequisite: NURS 401

NURS 402 (US;IL)

Holistic Health (3) Examination of emerging conceptualizations of health and therapy based on a holistic view of human beings.

Effective: Spring 2017 Future: Spring 2017

NURS 415 (US;IL)

Community and Family Health Nursing (4) Therapeutic nursing care and health promotion concepts to families, groups and populations in the community.

Effective: Fall 2012 Ending: Fall 2016

Prerequisite: all 300-level required NURS courses must be completed

NURS 415 (US;IL)

Community and Family Health Nursing (4) Therapeutic nursing care and health promotion concepts to families, groups and populations in the community.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: NURS 305

NURS 417 (US;IL)

Family and Community Health Concepts (4) Study of the concepts of family and community based nursing care emphasizing multicultural influences on health practices.

Effective: Fall 2008

Prerequisite: NURS 390 and current and valid RN license; Prerequisite or concurrent: NURS 357

NURS 452 (BB H 452, WMNST 452) (US)

Women's Health Issues (3) Exploration of major health issues concerning women today, with an emphasis on social, cultural, and medical influences.

Effective: Fall 2013

Prerequisite: BIOL 141 or PSYCH 100 or WMNST 100

NURS 464 (US;IL)

Dying and Death (3) Explores attitudes toward death and dying; concept of grief; responsibilities to the dying person and the family.

Effective: Fall 2008 Ending: Fall 2016

Prerequisite: PSYCH 100 or SOC 001

NURS 464 (US;IL)

Dying and Death (3) Explores attitudes toward death and dying; concept of grief; responsibilities to the dying person and the family.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: PSYCH 100 or SOC 001

NURS 499 (IL)

Foreign Study--Nursing (1-9) Study of nursing issues in a foreign country.

Effective: Fall 2008

NUTR 111 (HIST 111) (GH;US)

American Food System: History, Technology and Culture (3) A cultural analysis of the evolution of U.S. agricultural production and food consumption patterns, the food industry and food marketing.

Effective: Fall 2013

NUTR 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

NUTR 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

NUTR 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

NUTR 421 (US;IL)

Food Culture and Health Trends (3) Social-political, historic, and geographic roots of food patterns, featuring specific cuisine areas and nutritional disease patterns; includes foods laboratory.

Effective: Summer 2016

Prerequisite: NUTR 119 or NUTR 320 ; NUTR 251

NUTR 425 (IL)

Global Nutrition Problems: Health, Science, and Ethics (3) Examines causes of malnutrition and health problems in low-income countries; explores international cultures and ethical issues related to hunger.

Effective: Spring 2013

Prerequisite: NUTR 251

NUTR 430 (S T S 430) (IL)

Global Food Strategies: Problems and Prospects for Reducing World Hunger (3) Technological, social, and political solutions to providing basic food needs; food resources, population, and the environment; current issues.

Effective: Summer 2005

NUTR 456 (US)

Community Nutrition (3) Programs and policies of nutrition-related activities of community agencies; factors pertinent to nutrition education; relationship of cultural and social identity to foods and nutrition.

Effective: Fall 2012

Prerequisite: NUTR 251

NUTR 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

O T 103 (US)

Occupational Performance Across the Life Span (3) Analysis of occupations from birth to death including descriptions of occupational performance and factors which influence performance.

Effective: Spring 2011

Prerequisite: O T 100S O T 101

OLEAD 410 (IL)

Leadership in a Global Context (3) This course explores the science and practice of leadership around the globe through pertinent scholarly literature and related instructional resources.

Effective: Spring 2015

Prerequisite: OLEAD 100

P T 270A (IL)

Pathophysiology (3-4) Introduction to medical and post-operative conditions and disease states frequently treated by physical therapy interventions in the USA and Africa.

Effective: Spring 2015

Prerequisite: a grade of C or better in BIOL 141 BIOL 142 P T 100 P T 384

PHIL 006 (CMLIT 006) (GH;IL)

Philosophy and Literature in Western Culture (3) Explores fundamental issues of human existence through the traditions of western literature and philosophy.

Effective: Spring 2006

PHIL 007 (GH;IL)

Asian Philosophy (3) Introduction to philosophical, moral, and aesthetic teachings of Asian traditions such as Hinduism, Buddhism (including Zen), Taoism, Confucianism, and Shintoism.

Effective: Summer 2005

PHIL 009 (GH;US)

Philosophy, Race, and Diversity (3) Critically examines the significance of race and cultural diversity for, and in, understandings of reality, knowledge, truth, morality, and justice.

Effective: Summer 2005

PHIL 014 (GH;US)

Philosophy of Love and Sex (3) Explores Western theories and attitudes concerning intimacy and examines various ethical issues involving love and sex.

Effective: Summer 2005

PHIL 135 (J ST 135, RL ST 135) (GH;IL)

Ethics in Jewish Tradition and Thought (3) Examination of Jewish ethical thought from biblical foundations to the modern period, with attention to contemporary issues in moral philosophy.

Effective: Summer 2015

PHIL 199 (IL)

Foreign Study--Philosophy (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PHIL 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PHIL 399 (IL)

Foreign Study--Philosophy (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PHIL 437 (IL)

World Philosophies and Cultures (3) Philosophical traditions, problems, and authors in African, Asian, Middle- Eastern, Native American, or other non-Western cultures and intellectual traditions.

Effective: Fall 2007

Prerequisite: 9 credits of philosophy including 6 credits of philosophy at the 200 level or 5th semester standing

PHIL 439 (IL)

Asian Philosophies and Issues (3) Exploration of the traditions, problems, and authors of one or more of the philosophical systems of Buddhism, Hinduism, Taoism, and Confucianism.

Effective: Fall 2007

Prerequisite: PHIL 007 9 credits in philosophy including PHIL 007 or 5th semester standing

PHIL 460 (AF AM 460) (US;IL)

African American Philosophy (3) Major works by African American Philosophers, on topics of race, freedom, citizenship, nationhood, law and society.

Effective: Spring 2013

Prerequisite: AF AM 100 or PHIL 009 and 5th semester standing

PHIL 499 (IL)

Foreign Study--Philosophy (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PHOTO 099 (IL)

Foreign Studies--Photo (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

PHOTO 199 (IL)

Foreign Studies--Photo (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

PHOTO 299 (IL)

Foreign Studies--Photo (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

PHOTO 399 (IL)

Foreign Studies--Photo (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

PHOTO 499 (IL)

Foreign Studies--Photo (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2012

PHYS 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

PHYS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

PHYS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

PL ET 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2010

PL SC 003 (GS;IL)

Introduction to Comparative Politics (3) Introduction to study of comparative government and politics: normative/empirical theories; government functions in modern societies; representative structures and processes.
Effective: Fall 2007

PL SC 003U (GS;IL)

Introduction to Comparative Politics (3) Introduction to study of comparative government and politics: normative/empirical theories; government functions in modern societies; representative structures and processes.
Effective: Summer 2012

PL SC 014 (GS;IL)

International Relations (3) Characteristics of modern nation-states and forces governing their international relations; nationalism; imperialism; diplomacy; current problems of war and peace. Credit will not be given for both this course and INT U 200.
Effective: Fall 2007

PL SC 020 (GS;IL)

Comparative Politics--Western Europe (3) Comparative analysis of political cultures, interest groups, parties, and decision-making processes in principal Western European political systems.
Effective: Fall 2007

PL SC 022 (GS;IL)

Politics of the Developing Areas (3) The impact of colonialism, nationalism, and development policy on the political culture, structure, and transformation of post-colonial regimes.
Effective: Spring 2010

PL SC 060 (ANTH 060, J ST 060, SOC 060) (GS;IL)

Society and Cultures in Modern Israel (3) An introduction to the society and cultures of the State of Israel from 1948 to the present.
Effective: Summer 2006

PL SC 110 (GS;US)

Rights in America (3) This course explores the historical and contemporary struggles of particular groups within American society to expand their rights.
Effective: Summer 2006

PL SC 123 (GS;US;IL)

Ethnic and Racial Politics (3) Political movements among United States ethnic and racial groups; government policies on race and ethnicity; comparison to other culturally diverse countries.
Effective: Fall 2007
Prerequisite: PL SC 001 or PL SC 003

PL SC 130 (GS;US)

American Political Campaigns and Elections (3) Methods and strategies of American political campaigns: polls, political consultants, parties, and the media.
Effective: Fall 2007

PL SC 132 (GS;IL)

The Politics of International Intolerance (3) Introductory course emphasizing psychological, historical, and political aspects of global intolerance towards minorities.
Effective: Fall 2007

PL SC 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

PL SC 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

PL SC 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

PL SC 428 (WMNST 428) (US;IL)

Gender and Politics (3) Gender in politics in the United States and around the world; major areas of women and politics

research.

Effective: Fall 2007

Prerequisite: 3 credits in political science or women's studies

PL SC 434 (AFR 434) (IL)

War and Development in Africa (3) This course will examine the relationship between war and development in sub-Saharan Africa in the post colonial era.

Effective: Fall 2012

Prerequisite: PL SC 014 PL SC 003 AFR 110

PL SC 440 (AFR 440, I B 440) (US;IL)

Globalization and Its Implications (3) This course explores the socioeconomic implications of globalization.

Effective: Spring 2013

Prerequisite: AF AM 100 or AFR 110 or PL SC 003 or PL SC 014 or PL SC 020 or PL SC 022

PL SC 443 (AFR 443) (IL)

Ethnic Conflict in Africa (3) This course explores the various causes and impacts of ethnic conflicts in the African context.

Effective: Spring 2013

Prerequisite: AF AM 100 AFR 110 PL SC 001 PL SC 003 PL SC 007 PL SC 014 PL SC 017 PL SC 020 or AFRAS 301

PL SC 445Y (AF AM 445Y, LER 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

PL SC 453 (IL)

Political Processes in Underdeveloped Systems (3) Comparative analysis of the political, social, and economic problems characteristic of underdeveloped systems.

Effective: Fall 2007

Prerequisite: PL SC 003 PL SC 020 or PL SC 022

PL SC 454 (AFR 454) (IL)

Government and Politics of Africa (3) Contemporary African politics, institutions, and ideologies; patterns of change, social forces, and nation building in selected African states.

Effective: Fall 2012

Prerequisite: 3 credits from: AFR 110 PL SC 003 PL SC 020 or PL SC 022

PL SC 459 (AFR 459) (IL)

Culture and World Politics (3) Role of culture in world politics.

Effective: Spring 2013

PL SC 461 (IL)

Politics of the European Union (3) This course introduces students to the history, institutions and politics of the European Union.

Effective: Spring 2011

Prerequisite: PL SC 003 or PL SC 020

PL SC 463 (ASIA 463) (IL)

Government and Politics of China (3) This course will present an overview of modern Chinese politics since 1949.

Effective: Spring 2016

Prerequisite: PL SC 003 PL SC 014 PL SC 022 or ASIA 100

PL SC 464 (AFR 464) (IL)

Extractive Industries in Africa (3) Socioeconomic and environmental impacts of extractive industries in Africa.

Effective: Fall 2015

Prerequisite: AFR 110 or at least one of the following: PL SC 003 or PL SC 014 or PL SC 022

PL SC 465Y (ASIA 465Y) (IL)

Democratization in Asia (3) A course which identifies components of democracy, such as definitions, measures, datasets, and the democratization process.

Effective: Spring 2016

Prerequisite: PL SC 003 or ASIA 100

PL SC 469 (ASIA 469) (IL)

Government and Politics of South Asia (3) This course offers an overview of the politics of modern South Asia with specific focus on Afghanistan, India and Pakistan.

Effective: Summer 2014

Prerequisite: PL SC 003 PL SC 014 PL SC 022 or ASIA 100

PL SC 486 (HIST 489, ASIA 489) (IL)

International Culture in East Asia (3) Study of the role of culture in East Asian regional and East-West international relations.

Effective: Summer 2013

Prerequisite: any one of the following: HIST 172 HIST 174 HIST 175 HIST 480 HIST 481 HIST 483 HIST 484 HIST 485 HIST 486

PL SC 499 (IL)

Foreign Study--Government (1-12) Study, in selected foreign countries, of political institutions.

Effective: Summer 2005

Prerequisite: PL SC 003 3 credits in economics history political science or sociology

POL 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

POL 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

POL 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

POL 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PORT 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PORT 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PORT 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PORT 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

PSYCH 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

PSYCH 231 (GS;US)

Introduction to the Psychology of Gender (3) Psychological study of gender in historical and contemporary perspective. Role of gender in development, self-concept, social relations, and mental health.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 232 (GS;US;IL)

Cross-Cultural Psychology (3) This course examines how ethnic and cultural background influences patterns of human thought and behavior.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

PSYCH 370 (US)

Psychology of the Differently-Abled (3) This course familiarizes students with the needs and abilities of people with varying physical challenges through academic and experimental exercises.

Effective: Spring 2007

Prerequisite: PSYCH 100

PSYCH 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

PSYCH 432 (US)

Multicultural Psychology in America (3) This course focuses on the central role of culture, race, and ethnicity in the human condition.

Effective: Spring 2007

Prerequisite: PSYCH 100 6 additional credits of PSYCH

PSYCH 472H (S PSY 472H) (IL)

Human Development, Health, & Education From A Global Perspective (3) Intended to address the University's global community objectives and provide scholarly background on India for Schreyer Honors students.

Effective: Spring 2016

Prerequisite: PSYCH 100H

PSYCH 479 (WMNST 471) (US)

The Psychology of Gender (3) Theories and research on gender differences and gender roles. Emphasis on women's and men's current positions in society.

Effective: Spring 2007

Prerequisite: PSYCH 100 PSYCH 221

PSYCH 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2007

R M 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2012

R M 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2012

R M 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2012

R M 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2012

R SOC 011 (GS;US)

Introductory Rural Sociology (3) Basic sociological concepts applied to rural societal institutions and rural communities; causes and consequences of rural social change. Students may take only one course for General Education credit from R SOC 011 GS or SOC 001 GS.

Effective: Summer 2013

R SOC 499 (IL)

Foreign Study--Rural Sociology (1-12) Study in selected countries of rural social institutions and current rural sociological problems.

Effective: Summer 2013

RHS 100 (GS;US;IL)

Introduction to Disability Culture (3) Social and cultural contexts of disability on both a micro and macro levels will be examined.

Effective: Fall 2011

RL ST 001 (GH;US;IL)

Introduction to World Religions (3) An historical and comparative survey of the principal beliefs and practices of the world's major religions.

Effective: Summer 2005

RL ST 003 (ASIA 003) (GH;US;IL)

Introduction to the Religions of the East (3) Religious experience, thought, patterns of worship, morals, and institutions in relation to culture in Eastern religions.

Effective: Spring 2015

RL ST 004 (CAMS 004, J ST 004) (GH;US;IL)

Jewish and Christian Foundations (3) Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationships to culture.

Effective: Summer 2005

RL ST 012 (CAMS 012, J ST 012) (GH;IL)

Lands of the Bible (3) Textual and archaeological evidence for the lands, cities, and peoples associated with the Hebrew Bible and Christian scriptures.

Effective: Summer 2005

RL ST 044 (CAMS 044) (GH;IL)

Ancient Near Eastern and Egyptian Mythology (3) Survey of major ancient Mediterranean myths, gods, and goddesses in their cultural contexts; influence on later cultures.

Effective: Summer 2005

RL ST 070 (CAMS 070, J ST 070) (GH;IL)

Prophecy: The Near East Then and Now (3) Prophecy in the ancient Near East, the ancient Jewish and Christian traditions, and today.

Effective: Summer 2007

RL ST 090 (CAMS 090, J ST 090) (GH;IL)

Jerusalem: Past, Present, and Future (3) Social, cultural, religious, political, and archaeological history of Jerusalem from earliest times (c. 3000 BCE) to the present.

Effective: Fall 2015

RL ST 101 (GH;IL)

Comparative Religion (3) Comparative or historical analysis of religious factors--worship, theology, ethics, scriptures, etc., in two or more religious traditions.

Effective: Summer 2005

RL ST 102 (CAMS 102, HIST 102, J ST 102) (GH;IL)

Canaan and Israel in Antiquity (3) Political, social, and intellectual history of the land of Canaan/Israel in the Biblical era: Late Bronze and Iron Ages.

Effective: Summer 2005

RL ST 103 (ASIA 103) (GH;US;IL)

Introduction to Hinduism (3) Historical development of Hinduism to the present.

Effective: Spring 2015

RL ST 104 (ASIA 104) (GH;US;IL)

Introduction to Buddhism (3) A general survey of the basic doctrine, practice, and historical development of Hinayana and Mahayana Buddhism.

Effective: Spring 2015

RL ST 105 (GH;US;IL)

Buddhism in the Western World (3) A general survey of the development of Buddhism as a religious tradition in the West, focusing especially on America.

Effective: Summer 2005

RL ST 106 (J ST 106) (GH;IL)

Mysticism and Kabbalah (3) A survey of the history, philosophy, and cultural impact of various mystical traditions in relation to world religions.

Effective: Fall 2015

RL ST 107 (GH;US;IL)

Introduction to Islam (3) Community and message of the early movement; development of authoritative structures and traditions; proliferation of sects; theology and creeds; mysticism.

Effective: Spring 2006

RL ST 110 (CAMS 110, J ST 110) (GH;US;IL)

Hebrew Bible: Old Testament (3) Introduction to the history, literature, and religion of ancient Israel.

Effective: Summer 2005

RL ST 111 (CAMS 111, J ST 111) (GH;IL)

Early Judaism (3) Religious thought, practices, and parties in the Second Temple period; the emergence of rabbinic Judaism.

Effective: Summer 2005

RL ST 113 (J ST 113, CAMS 113, CMLIT 113) (GH;IL)

Myths and Legends of the Jews (3) Comparative study of diverse interpretations of stories from the Bible in Judaism and Christianity.

Effective: Fall 2016

RL ST 114 (J ST 114) (GH;US;IL)

Modern Judaism (3) Trends in Jewish life and thought since the French revolution; Judaism's responses to the challenge of modernity.

Effective: Summer 2005

RL ST 115 (HIST 115, J ST 115) (GH;US)

The American Jewish Experience (3) Examination of the history, culture, social tensions, and contributions of Jews and Judaism in America.

Effective: Fall 2015

RL ST 116 (GH;IL)

Muslims in America (3) This course is a study of Muslims from multiple racial, cultural, and national perspectives; it explores what it means to be a Muslim in America.

Effective: Summer 2010

RL ST 121 (CAMS 121, J ST 112) (GH;IL)

Jesus the Jew (3) A historical critical examination of the life of Jesus of Nazareth within the content of first century Palestinian Judaism.

Effective: Fall 2015

RL ST 122 (CAMS 122, J ST 122) (GH;IL)

Apocalypse and Beyond (3) This course surveys apocalyptic literature and apocalyptic movements from the ancient Near East to the modern world.

Effective: Summer 2014

RL ST 123 (CAMS 123, J ST 123) (GH;IL)

Ancient Monotheisms: Judaism, Christianity, Islam (3) Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam.

Effective: Summer 2014

RL ST 124 (CAMS 124, J ST 124) (GH;US;IL)

Early and Medieval Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century.

Effective: Summer 2005

RL ST 134 (CAMS 134) (GH;IL)

Archaeology of Biblical Israel (3) Archaeology of Biblical Israel from 1200 B.C.E. to c. 640 C.E.; relationship between archaeological and textual evidence.

Effective: Fall 2015

RL ST 135 (J ST 135, PHIL 135) (GH;IL)

Ethics in Jewish Tradition and Thought (3) Examination of Jewish ethical thought from biblical foundations to the modern period, with attention to contemporary issues in moral philosophy.
Effective: Summer 2015

RL ST 137 (WMNST 137, J ST 137) (GH;US;IL)

Women and Religion (3) Jewish and Christian religious views on womanhood; thought and lives of important religious women; and feminist understandings of these.
Effective: Fall 2012

Prerequisite: third-semester standing

RL ST 140Y (AM ST 140Y) (GH;US)

Religion in American Life and Thought (3) The function, contributions, tensions, and perspectives of religion in American culture.
Effective: Summer 2005

RL ST 145 (AF AM 145) (GH;US;IL)

African American Religions and Spirituality (3) History and significance of the religious dimension of the Black American struggle for equality from enslavement to the contemporary period.
Effective: Spring 2015

RL ST 146 (AF AM 146) (GH;US)

The Life and Thought of Martin Luther King, Jr. (3) A survey of the civil rights leader including his religious beliefs, intellectual development, and philosophy for social change.
Effective: Spring 2013

RL ST 147 (AF AM 147) (GH;US)

The Life and Thought of Malcolm X (3) The life of Malcolm X/El Hajj Malik El Shabazz (1925-1965) and his social, political, economic, and moral thought.
Effective: Fall 2013

RL ST 153 (CAMS 153, J ST 153) (GH;IL)

Dead Sea Scrolls (3) Examines the discovery, contents, and interpretations of the Dead Sea Scrolls, Jewish texts from approximately 225 B.C.E. to 68 C.E.
Effective: Summer 2014

RL ST 160 (CAMS 160, J ST 160) (GH;IL)

Sacrifice in Ancient Religions (3) Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East.
Effective: Summer 2014

RL ST 164 (ARAB 164) (GH;IL)

Muhammad and the Qur'an (3) History of the Qur'an and its interpretation by the early Muslim community; life of Muhammad and his role within Islam.
Effective: Fall 2015

RL ST 165 (ARAB 165, HIST 165) (IL)

Introduction to Islamic Civilization (3) Islamic history, culture, religious life c.600-1500 C.E.
Effective: Spring 2006

RL ST 181 (ASIA 181) (IL)

Introduction to the Religions of China and Japan (3) A survey of the history, philosophy, and cultural impact of the major Far Eastern religions: Confucianism, Taoism, Buddhism, and Shinto.
Effective: Spring 2015

RL ST 190 (J ST 190, HIST 190) (GH;IL)

Religion and Conflict (3) Critical examination of the role religion has played in human conflict.
Effective: Summer 2015

RL ST 235 (HIST 235, J ST 235) (US;IL)

The Church and the Jews (3) Examination of the relationship between Western church and the Jews from the First Century to Enlightenment.
Effective: Spring 2006

RL ST 280 (WMNST 280, J ST 280) (GH;IL)

WOMEN AND JUDAISM (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.
Effective: Spring 2006

RL ST 405 (J ST 405) (IL)

Jews and Food (3) Jewish laws, customs and attitudes with regard to food production, agricultural policy and eating from biblical to modern times.
Effective: Spring 2016

RL ST 407Y (HIST 409Y, J ST 409Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.
Effective: Fall 2015

RL ST 408 (US;IL)

Hindu Studies (3) Special topics in Hindu studies.
Effective: Summer 2005
Prerequisite: 3 credits in religious studies

RL ST 409 (US;IL)

Buddhist Studies (3) Special topics in Buddhist studies.

Effective: Spring 2006

Prerequisite: 3 credits in religious studies

RL ST 410 (HIST 410, J ST 410) (US;IL)

Jews in the Medieval World (3) Trends in medieval Jewish society under Islam and Western Christendom.

Effective: Spring 2006

RL ST 411 (J ST 411) (US;IL)

Jewish Studies (3) Study of the life and thought of a particular period or movement in the history of Judaism.

Effective: Spring 2006

Prerequisite: 3 credits in religious studies

RL ST 422 (AM ST 422, HIST 422) (GH;US)

Religion and American Culture (3 per semester/maximum of 6) Selected topics, problems, or historical movements in American religion. Relation between religion and American culture.

Effective: Fall 2015

Prerequisite: 3 credits of history or religious studies

RL ST 423 (HIST 423) (GH;IL)

Orthodox Christianity: History and Interpretations (3) Examines Orthodox Christianity from origins to present using critical historical analysis of primary and secondary sources.

Effective: Spring 2015

Prerequisite: HIST 105

RL ST 440Y (US;IL)

The Orthodox Christian Tradition (3) History, culture, and beliefs of the Eastern Orthodox religious tradition with special reference to Russia.

Effective: Summer 2011

Prerequisite: RL ST 004 RL ST 124 RL ST 125 RUS 100 or RUS 110

RL ST 461 (SOC 461) (US;IL)

Sociology of Religion (3) Contemporary religion in the global perspectives: beliefs, structure, and function of major religious traditions, denominations, and cults.

Effective: Fall 2013

Prerequisite: 3 credits of sociology or religious studies

RL ST 471Y (HIST 471Y) (IL)

Classical Islamic Civilization, 600-1258 (3) Pre-Islamic Arabia; Muhammad; Arab conquest; Islamic beliefs and institutions; literary, artistic, and scientific achievements; relations with Europe; breakdown of unity.

Effective: Spring 2006

RL ST 483 (ASIA 487) (IL)

Zen Buddhism (3) The development and current state of Zen Buddhist thought and practice.

Effective: Fall 2016

RL ST 499 (IL)

Foreign Study--Religious Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RPTM 120 (GS;US;IL)

Leisure and Human Behavior (3) Leisure from historical and contemporary perspectives, including forces shaping leisure behavior, and relationships among leisure, the environment, and social institutions.

Effective: Spring 2010

RPTM 199 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2013

RPTM 277 (US)

Inclusive Leisure Services (3) Review of leisure services and programs designed to be inclusive of individuals from underrepresented groups and overview of professional, legal, and ethical issues.

Effective: Fall 2013

RPTM 299 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Foreign Studies in RPTM.

Effective: Summer 2012

Prerequisite: RPTM 199

RPTM 300Y (IL)

Tourism and Leisure Behavior (3) Examination of the impact of recreational sociocultural, governmental, economic, and physical environment on the leisure traveler within the tourism industry.

Effective: Summer 2005

RPTM 399 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Foreign Studies in RPTM.

Effective: Summer 2012

Prerequisite: RPTM 199

RPTM 499 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Foreign Studies in RPTM.

Effective: Summer 2012

Prerequisite: RPTM 199

RTE 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2011

RTE 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2011

RTE 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2011

RUS 083S (GH;US;IL)

First-Year Seminar in Russian (3) Russia's cultural past and present.

Effective: Summer 2005

RUS 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 100 (GH;IL)

Russian Culture and Civilization (3) The Russian people from the tenth century to present times; their literature, arts, music, science, and philosophy. In English.

Effective: Summer 2005

RUS 110 (GH;IL)

Russian Folklore (3) Study of byliny, lyrical and historical songs, folktales, drama, ceremonial poetry, chants, charms, proverbs, and mythology of Russia. In English.

Effective: Summer 2005

RUS 141Y (IL)

Russian Literature in English Translation: 1800-1870 (3) Pushkin, Lermontov, Gogol, the critics, Turgenev, Dostoevsky, Tolstoy. Writing assignments will serve as a major way of exploring subject matter.

Effective: Spring 2006

RUS 142Y (IL)

Russian Literature in English Translation: 1870 to Present (3) Dostoevsky, Tolstoy, Chekhov, Gorky, symbolists, selected Soviet authors. Writing assignments will serve as a major way of exploring subject matter.

Effective: Spring 2006

RUS 143 (GER 143) (GH;IL)

The Culture of Stalinism and Nazism (3) The culture of Stalinist Russia and Nazi Germany in comparative perspective.

Effective: Summer 2005

RUS 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 200 (IL)

Intermediate Russian II (4) A continuation of intermediate Russian with a comprehensive grammar review and focus on reading, writing and speaking Russian.

Effective: Spring 2013

Prerequisite: RUS 003 or permission of program

RUS 204 (IL)

Intermediate Russian II (4) Intensive practice of Russian reading, writing, listening and speaking; review of Russian grammar.

Effective: Summer 2011

Prerequisite: RUS 003

RUS 214 (IL)

Intermediate Russian III (4) Intensive practice of Russian reading, writing, listening and speaking; review of Russian grammar.

Effective: Summer 2011

Prerequisite: RUS 003

RUS 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 304 (IL)

Readings in Russian III (3) Extensive reading of contemporary Russian texts, including articles from Soviet press and short fiction.

Effective: Spring 2006

Prerequisite: 6 credits of Russian at the 200 level

RUS 305 (IL)

Advanced Russian Conversation (3) Discussion and role-playing based on real-life situations and current events; supervised by a native speaker.

Effective: Spring 2006

Prerequisite: RUS 204 RUS 214

RUS 360 (IL)

Advanced Russian Grammar (3) Russian morphology and syntax on an advanced level.

Effective: Spring 2006

Prerequisite: 6 credits of Russian at the 200 level

RUS 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

RUS 400 (IL)

Senior Seminar in Russian Culture (3) Senior seminar devoted to topics in Russian culture; conducted in Russian.

Effective: Spring 2006

Prerequisite: RUS 204 RUS 214 RUS 304

RUS 405 (IL)

Seminar in Russian Literature (3-6 per semester/maximum of 6) Readings in classical Russian literature; Topics vary.

Effective: Summer 2012

Prerequisite: RUS 401 RUS 402 or RUS 403

RUS 406 (IL)

Russian Film (3) Conversation and Composition based on classical Russian films.

Effective: Summer 2012

Prerequisite: RUS 401 RUS 402 or RUS 403

RUS 410 (IL)

Heritage Russian 1 (3) Introductory course for heritage speakers of limited linguistic proficiency aiming at teaching basic reading, writing, and grammar skills in Russian.

Effective: Summer 2014

Prerequisite: basic speaking proficiency in Russian; placement test and consent of instructor

RUS 412 (IL)

Russian Translation (3 per semester/maximum of 6) Translation from Russian into English of complex texts from the humanities, social sciences, and technical fields.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 426 (IL)

Dostoevsky (3) Study of representative works by Dostoevsky in the original Russian.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 427 (IL)

Tolstoy (3) Study of representative works by Tolstoy in the original Russian.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 460 (IL)

Linguistic Analysis of Contemporary Russian (3) Detailed study of the phonology, morphology, and syntax of Modern Standard Russian and the major dialects.

Effective: Spring 2006

Prerequisite: 9 credits of Russian at the 200 level or higher

RUS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

S CR 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

S CR 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

S CR 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

S CR 499 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

S PSY 472H (PSYCH 472H) (IL)

Human Development, Health, & Education From a Global Perspective (3) Intended to address the University's global community objectives and provide scholarly background on India for Schreyer Honors students.

Effective: Spring 2016
Prerequisite: PSYCH 100H

S T S 124 (HIST 124) (GH;US;IL)

History of Western Medicine (3) This course explores the history of health, illness, and medicine in western society.
Effective: Summer 2008

S T S 150 (EM SC 150) (GN;IL)

Out of the Fiery Furnace (3) A history of materials, energy, and humans, with emphasis on their interrelationships. For nontechnical students.
Effective: Spring 2006

S T S 151 (HIST 151) (GS;US)

Technology and Society in American History (3) Development of technology in America from colonial times; its reception and its influence on social, economic, and political life.
Effective: Spring 2006

S T S 157 (WMNST 157) (US)

Science, Technology, and Gender (3) The role of women and gender in science, technology, and engineering.
Effective: Fall 2011

S T S 245 (GS;IL)

Globalization, Technology, and Ethics (3) An investigation of technology and ethics in the globalized world from contemporary, socio-cultural, and historical perspectives.
Effective: Summer 2008

S T S 416 (AF AM 416) (US;IL)

Race, Gender and Science (3) The class will focus on race and gender as products of science, and how societal values shape scientific activity.
Effective: Fall 2015
Prerequisite: 6 credits in S T S WMNST or AAA S

S T S 428 (HIST 428) (IL)

The Darwinian Revolution (3) The origins and implications of evolutionary theory.
Effective: Spring 2006
Prerequisite: An introductory Science course and a history course.

S T S 430 (NUTR 430) (IL)

Global Food Strategies: Problems and Prospects for Reducing World Hunger (3) Technological, social, and political solutions to providing basic food needs; food resources, population, and the environment; current issues.
Effective: Summer 2005

SCM 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2007

SCM 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2007

SCM 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2007

SCM 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2007

SLAV 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SLAV 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SLAV 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SLAV 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SLAV 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SOC 060 (ANTH 060, J ST 060, PL SC 060) (GS;IL)

Society and Cultures in Modern Israel (3) An introduction to the society and cultures of the State of Israel from 1948 to the present.
Effective: Summer 2006

SOC 103 (AF AM 103, WMNST 103) (US)

Racism and Sexism (3) Critical analysis of the structure of race and gender inequality in the contemporary United States.
Effective: Spring 2013

SOC 110 (WMNST 110) (GS;US)

Sociology of Gender (3) Changing sex role expectations and behavior for men and women in contemporary society.
Effective: Summer 2005

SOC 119 (GS;US)

Race and Ethnic Relations (4) Historical patterns and current status of racial and ethnic groups; inequality, competition, and conflict; social movements; government policy.
Effective: Summer 2005

SOC 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2010

SOC 209 (AFR 209) (GS;IL)

Poverty in Africa (3) The course examines the causes, consequences, and dynamics of poverty in African countries.
Effective: Fall 2013

SOC 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2007

SOC 409 (AF AM 409) (US)

Racial and Ethnic Inequality in America (3) The impact of inequality and discrimination on individual and group identity among various racial and ethnic groups.
Effective: Fall 2012
Prerequisite: 3 credits in Sociology

SOC 411 (HD FS 416) (US)

Racial and Ethnic Diversity and the American Family (3) This course will explore the nature and determinants of racial and ethnic variation in family processes in the United States.
Effective: Spring 2005
Prerequisite: 3 credits in sociology

SOC 416 (EDTHP 416) (US)

Sociology of Education (3) The theoretical, conceptual, and descriptive contributions of sociology to education.
Effective: Spring 2006
Prerequisite: 3 credits in Sociology

SOC 419 (US)

Race and Public Policy (3) Seminar format course in which sociological theory and research are applied to current race policy issues.
Effective: Spring 2006
Prerequisite: 3 credits in Sociology

SOC 447 (EDTHP 411) (US)

Ethnic Minorities and Schools in the United States (3) Analysis of the social and cultural factors which affect educational outcomes among minority pupils, especially Blacks, Hispanics, and Indians.
Effective: Fall 2015

SOC 454 (US)

The City in Postindustrial Society (3) Postindustrial social organization in the United States and Europe; consequences for metropolitan social stratification, community power, and environmental quality.
Effective: Spring 2006
Prerequisite: 3 credits in Sociology

SOC 457 (ANTH 457, J ST 457) (US;IL)

Jewish Communities: Identity, Survival, and Transformation in Unexpected Places (3) Examines the global array of smaller Jewish communities that have flourished outside the main urban centers of Jewish settlement.
Effective: Summer 2006
Prerequisite: ANTH 001 or ANTH 045 HEBR 010 J ST 010 SOC 001 SOC 005 SOC 007 SOC 015

SOC 461 (RL ST 461) (US;IL)

Sociology of Religion (3) Contemporary religion in the global perspective: beliefs, structure, and function of major religious traditions, denominations, and cults.
Effective: Fall 2013
Prerequisite: 3 credits in sociology or religious studies

SOC 499 (IL)

Foreign Study--Sociology (2-6) Study, in selected foreign countries, of groups, institutions, and social problems.
Effective: Summer 2005
Prerequisite: 3 credits in Sociology

SOILS 071 (GN;IL)

Environmental Sustainability (3) An introduction to environmental science, exploring sustainable human- environment interactions with examples from environmental soil science.
Effective: Summer 2013

SOILS 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

SPAN 083S (GH;IL)

First-Year Seminar in Hispanic Literatures and Cultures (3) Introduction to the study of Hispanic literatures and cultures.

Effective: Summer 2005

SPAN 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

SPAN 130 (GH;IL)

Iberian Civilization (3) Spanish and Portuguese life from the medieval period to the present; literature, the arts, and contemporary problems in historical perspective.

Effective: Spring 2006

SPAN 131 (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.

Effective: Summer 2005

SPAN 131Y (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.

Effective: Summer 2005

SPAN 132 (AF AM 132, AFR 132) (IL)

Afro-Hispanic Civilization (3) A general introduction to human and cultural elements of African origin in Spanish- and Portuguese-speaking countries of Latin America.

Effective: Spring 2013

SPAN 199 (IL)

Foreign Study--Beginning Conversational Spanish (3) Grammar review and practice in oral expression and aural comprehension.

Effective: Summer 2005

SPAN 299 (IL)

Foreign Study--Intermediate Conversational Spanish (3) Grammar review and practice in oral expression and aural comprehension.

Effective: Summer 2005

SPAN 315 (LTNST 315) (GH;US)

Spanish and Spanish-speakers in the U.S. (3) In this course, we investigate various aspects of the language(s) and language behaviors of U.S. Latinos.

Effective: Summer 2006

SPAN 326 (GH;US)

Reading the Border/Lands (3) This course examines representations of the U.S.-Mexico border in relation to the actual geographic space.

Effective: Summer 2011

SPAN 399 (IL)

Foreign Study--Spanish (1-12) Advanced training in Spanish language skills.

Effective: Summer 2005

Prerequisite: SPAN 003

SPAN 479 (LTNST 479) (GH;US)

U.S. Latina/o Culture en Espanol (3) The history, culture, art, and social issues of Latinos in the United States.

Effective: Summer 2014

Prerequisite: SPAN 253W

SPAN 499 (IL)

Foreign Study--Spanish (1-12) Contemporary Spanish life and civilization. Emphasis on post-Civil War period: literature, arts, and sociopolitical problems.

Effective: Summer 2005

Prerequisite: SPAN 100 SPAN 110 or SPAN 120

SRA 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2011

SRA 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2015

SRA 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2015

SRA 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Spring 2015

SS ED 200 (US)

American Heritage (3) Essentials of American Heritage for heritage interpretative education applications.
Effective: Spring 2012
Prerequisite: any U.S. History selection (3 credits) suggested HIST 020

STAT 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

STAT 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

STAT 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SWA 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SWA 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SWA 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SWA 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SWA 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005

SWENG 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2010

SWENG 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2010

THEA 100 (GA;US;IL)

The Art of the Theatre (3) An experiential survey of all aspects of the living theatre, as presented by a resident company of theatre artists.
Effective: Spring 2006

THEA 199 (IL)

Foreign Studies--Theatre Arts (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2005
Prerequisite: approval by department

THEA 207 (GA;US)

Gender and Theatre (3) A study of theatre and drama literature as formed by issues of gender, race, and ethnic background.
Effective: Summer 2005

THEA 208 (AF AM 208) (GA;US;IL)

Workshop: Theatre in Diverse Cultures (3) A performance-oriented class which explores the historic and contemporary theatrical works of various culturally diverse peoples.
Effective: Spring 2013

THEA 208S (GA;US;IL)

Workshop: Theatre in Diverse Cultures (3) A performance-oriented class, which explores the historic and contemporary theatrical works of various culturally diverse peoples.
Effective: Summer 2005

THEA 299 (IL)

Foreign Studies--Theatre Arts (1-12) Courses offered in foreign countries by individual or group instruction.
Effective: Summer 2014

THEA 399 (IL)

Foreign Studies--Theatre Arts (1-12) Courses offered in foreign countries by individuals or group instruction.
Effective: Summer 2014

THEA 401 (IL)

Theatre History I: Ancient to 1700 (3) Survey of drama and theatre from primitive rites through the Renaissance.

Effective: Fall 2016

Prerequisite: THEA 100 or THEA 105

THEA 405W (US)

Theatre History: American Theatre (3) Survey of American drama and theatre from the colonial period to the present.

Effective: Fall 2016

Prerequisite: THEA 100

THEA 407 (WMNST 407) (US)

Women and Theatre (3) A study of theatre practice and dramatic literature as informed by issues of gender, race, and ethnic background.

Effective: Spring 2008 Ending: Fall 2016

Prerequisite: THEA 100 or THEA 105

THEA 407W (WMNST 407) (US)

Women and Theatre (3) A study of theatre practice and dramatic literature as informed by issues of gender, race, and ethnic background.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: THEA 100 or THEA 105

THEA 408W (US)

History of American Musical Theatre (3) A survey of the history of American musical theatre presented in a social, cultural, and aesthetic perspective.

Effective: Fall 2016

Prerequisite: THEA 100 or THEA 105

THEA 412 (AF AM 412) (US;IL)

African American Theatre (3) Exploration of the development of African American theatre from its roots in Africa through the diaspora, to the present time.

Effective: Spring 2013

Prerequisite: THEA 100 or THEA 105

THEA 499 (IL)

Foreign Studies--Theatre Arts (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

Prerequisite: approval by department

TURF 499 (IL)

Foreign Studies (1-8) Courses offered in foreign countries by individual or group instruction.

Effective: Fall 2014

UKR 099 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

UKR 100 (GH;IL)

Ukrainian Culture and Civilization (3) Survey of Ukrainian culture and civilization from the Middle Ages to the present.

Effective: Summer 2005

UKR 199 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

UKR 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

UKR 399 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

UKR 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

W F S 299 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Spring 2014

W F S 499 (IL)

Foreign Studies (1-12 per semester/maximum of 12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

W P 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2013

WF ED 450 (US;IL)

Cultural Diversity in the Workplace (3) Provides opportunities for students to explore different cultures and mores that are changing the dynamics of the workplace.
Effective: Fall 2006

WMNST 001S (GS;US;IL)

Introduction to Women's Studies (3) Interdisciplinary consideration of the scholarly theories and research pertaining to women's experiences and women's status in contemporary American society.
Effective: Fall 2009

WMNST 083S (GH;US;IL)

First-Year Seminar in Women's Studies (3) Critical approaches to the dimensions and directions in Women's Studies.
Effective: Summer 2005

WMNST 100 (GS;US;IL)

Introduction to Women's and Gender Studies (3) Interdisciplinary consideration of the scholarly theories and research pertaining to women's experiences and women's status in contemporary American society.
Effective: Spring 2013

WMNST 100U (GS;US;IL)

Introduction to Women's and Gender Studies (3) Interdisciplinary consideration of the scholarly theories and research pertaining to women's experiences and women's status in contemporary American society.
Effective: Fall 2016 Ending: Fall 2016

WMNST 101 (AF AM 101) (GH;US)

The African American Woman (3) The sociological, historical and political experiences of African American women, their roles and contributions to society.
Effective: Spring 2013

WMNST 102 (AF AM 102) (GH;IL)

Women of Color: Cross-Cultural Perspective (3) Global examination of value systems of women of color; attention to minority ethnic groups in the United States and developing countries.
Effective: Spring 2013

WMNST 103 (AF AM 103, SOC 103) (US)

Racism and Sexism (3) Critical analysis of the structure of race and gender inequality in the contemporary United States.
Effective: Spring 2013

WMNST 104 (AM ST 104) (GH;US)

Women and the American Experience (3) Selected aspects of the role of women in United States history and culture from colonial to modern times.
Effective: Summer 2005

WMNST 105 (GS;US)

Living in a Diverse World (3) Critical perspectives on the relationship between social difference and power, emphasizing gender, race, sexuality, class, and disability.
Effective: Spring 2015

WMNST 106 (GH;US;IL)

Representing Women and Gender in Literature, Art and Popular Cultures (3) Interdisciplinary consideration of primary works and scholarship pertaining to women in the humanities and the arts.
Effective: Spring 2013

WMNST 110 (SOC 110) (GS;US)

Sociology of Gender (3) Changing sex role expectations and behavior for men and women in contemporary society.
Effective: Summer 2005

WMNST 116 (HIST 116) (GS;US;IL)

Family and Sex Roles in Modern History (3) Historical perspectives on the Western family since 1500: gender roles, marriage, sexuality, child rearing, and old age; emphasis on United States.
Effective: Spring 2006

WMNST 117 (HIST 117) (GH;US;IL)

Women in Modern History (3) Modernization and women: changing images and roles since mid-eighteenth century in the family, workshop, politics, society. Cross-cultural comparisons.
Effective: Summer 2005

WMNST 136 (LER 136) (US)

Race, Gender, and Employment (3) Employment relations and legislative and policy responses to labor force issues of racial and gender inequality.
Effective: Spring 2008

WMNST 137 (RL ST 137, J ST 137) (GH;US;IL)

Women and Religion (3) Jewish and Christian religious views on womanhood; thought and lives of important religious women; and feminist understandings of these.
Effective: Fall 2012

Prerequisite: third-semester standing

WMNST 157 (S T S 157) (US)

Science, Technology, and Gender (3) The role of women and gender in science, technology, and engineering.
Effective: Fall 2011

WMNST 166 (HIST 166) (GH;US)

History of Sexuality (3) Discusses the ideas, practices, and identities surrounding sexuality over several centuries in a variety of contexts, focusing primarily on the US.

Effective: Summer 2012

Prerequisite: one introductory level course in History or Women's Studies

WMNST 194 (ENGL 194) (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by British, American, and other English-speaking women writers.

Effective: Summer 2005

WMNST 199 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

WMNST 200 (GS;IL)

Global Feminisms (3) This course examines the diverse contents and forms of "feminism" worldwide, emphasizing women's engagement with unequal, unjust, impacts of globalization.

Effective: Summer 2012

WMNST 202 (AFR 202) (GS;IL)

Gender Dynamics in Africa (3) Critical analysis of multidisciplinary research on relations between men and women in Africa and critique of Western feminist theories.

Effective: Fall 2012

WMNST 205 (COMM 205) (GS;US)

Gender, Diversity and the Media (3) Explores the relationship between media and society through critical analysis of its role in social reality.

Effective: Spring 2015

WMNST 213Y (HIST 213Y, AF AM 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.

Effective: Spring 2015

WMNST 227 (ENGL 227) (GH;US;IL)

Introduction to Culture and Sexuality (3) A course addressing the relationships between sexuality, literature, and culture.

Effective: Spring 2013

Prerequisite: ENGL 015 or ENGL 030

WMNST 235 (IST 235) (US)

Gender and the Global Information Technology Sector (3) Integrates information technology and gender studies. Overview issues and socio-cultural shaping of gender in the IT field.

Effective: Summer 2013

WMNST 245 (ENGL 245) (GH;US)

Introduction to Lesbian and Gay Studies (3) An introduction to the study of sex and (homo) sexual identity across a wide range of disciplines and methodologies.

Effective: Spring 2013

WMNST 250 (HD FS 250) (US)

Sexual Identity Over the Lifespan (3) Concepts of affectional and sexual orientation over lifespan, with emphasis on lesbian and gay male personal, family, and community adaptation.

Effective: Summer 2005

Prerequisite: 3 credits in Hd FS or 3 credits in behavioral sciences

WMNST 266Y (HIST 266Y) (GH;US)

Sex and Violence in Nineteenth-Century America (3) Historical Overview of Sex and Violence in the Nineteenth-Century United States.

Effective: Spring 2015

WMNST 280 (J ST 280, RL ST 280) (GH;IL)

Women and Judaism (3) Explores the Jewish views of women that have influenced the roles of women within both the religion and Western culture.

Effective: Fall 2006

WMNST 299 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

WMNST 300 (LTNST 300) (US)

Latinas in the US: Gender Culture and Society (3) This course examines the historical development, theoretical premises, and political, social, and artistic contributions of Latina feminisms in the United States.

Effective: Spring 2013

Prerequisite: LTNST 100 or WMNST 100

WMNST 301 (GH;US;IL)

Sexualities, Gender and Power: Feminist Thought and Politics (3) An interdisciplinary survey of historical and contemporary feminist theories in both the United States and international contexts.

Effective: Spring 2013

Prerequisite: WMNST 100 or WMNST 106

WMNST 303 (AF AM 303, ANTH 303) (GS;IL)

Race and Gender in the Americas: Latin American and Caribbean Cultures (3) Utilizing a theoretical framework of intersectionality, this course examines historical and cultural constructions of race and gender in Latin America and the Caribbean.

Effective: Spring 2015

WMNST 364 (AF AM 364) (GS;US)

Black & White Sexuality (3) This course explains how narrow ways of thinking limit our understanding of the diverse expressions of human sexuality.

Effective: Fall 2012

WMNST 399 (IL)

Foreign Studies (12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

WMNST 400 (US;IL)

Debates in Contemporary Feminism (3) Consideration of feminist theories of women's experience in transforming understanding, reconceptualizing old problems, raising new ones, and expanding traditional disciplines.

Effective: Spring 2013

Prerequisite: WMNST 301

WMNST 407 (THEA 407) (US)

Women and Theatre (3) A study of theatre practice and dramatic literature as informed by issues of gender, race, and ethnic background.

Effective: Summer 2005 Ending: Fall 2016

Prerequisite: THEA 100

WMNST 407W (THEA 407) (US)

Women and Theatre (3) A study of theatre practice and dramatic literature as informed by issues of gender, race, and ethnic background.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: THEA 100

WMNST 420 (CED 420) (US;IL)

Women in Developing Countries (3) Analysis of women's work, experiences, and development policies and practices in Africa, Asia, and Latin America.

Effective: Fall 2014

WMNST 421 (HIST 421) (IL)

The History of European Women (3) European women's lives from the Middle Ages to the present.

Effective: Spring 2013

Prerequisite: WMNST 100 WMNST 106 WMNST 116 or WMNST 117

WMNST 423 (CRIMJ 423, CRIM 423) (US)

Sexual and Domestic Violence (3) Legal, sociological, and psychological perspectives of sexual and domestic violence.

Effective: Spring 2008

Prerequisite: CRIM 100

WMNST 424 (KINES 424) (US)

Women and Sport (3) An interdisciplinary approach to contemporary issues related to women and sport from historical, physiological, psychological, and sociological perspectives.

Effective: Spring 2013

Prerequisite: PSYCH 100 PSYCH 231 PSYCH 479 SOC 001 or WMNST 100

WMNST 426Y (GEOG 426Y) (US;IL)

Gender Geographies (3) Description and explanation of the links between gender relations and spatial structures; gender and work, social services, and neighborhood activism.

Effective: Fall 2013

Prerequisite: GEOG 020 GEOG 126 GEOG 120 WMNST 100

WMNST 428 (PL SC 428) (US;IL)

Gender and Politics (3) Gender in politics in the United States and around the world; major areas of women and politics research.

Effective: Fall 2007

Prerequisite: 3 credits in political science or women's studies

WMNST 430 (AM ST 430) (US)

Women in American Society (3) A historical study of women's roles and experiences in the United States.

Effective: Spring 2008

Prerequisite: 6 credits of American Studies Sociology or Women's Studies

WMNST 450W (CAMS 450W) (IL)

Gender and Sexuality in Ancient Greece and Rome (3) An examination of gender, sexuality, and sexual desire in ancient Greece and Rome.

Effective: Spring 2016

Prerequisite: 3 credits in CAMS

WMNST 452 (BB H 452, NURS 452) (US)

Women's Health Issues (3) Exploration of major health issues concerning women today, with an emphasis on social,

cultural, and medical influences.

Effective: Fall 2013

Prerequisite: BIOL 141 or PSYCH 100 or WMNST 100

WMNST 453 (CRIMJ 453, CRIM 453) (US)

Women and the Criminal Justice System (3) This course focuses on the experiences of women as offenders, victims, and professionals in the criminal justice system.

Effective: Spring 2013

Prerequisite: CRIMJ 100 or WMNST 100

WMNST 455 (CAS 455) (US)

Gender Roles in Communication (3) Explores the literature on gender research in the discipline of human communication.

Effective: Summer 2005

Prerequisite: CAS 202

WMNST 462 (ENGL 462) (US)

Reading Black, Reading Feminist (3) Female identity and its construction in textual representations of gender, class, color, and cultural difference in English-language literatures.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

WMNST 464 (BE SC 464) (US)

Feminine/Masculine (3) Study of sex role learning; investigating feminine/masculine labeling; implications for contemporary society.

Effective: Spring 2008

Prerequisite: general psychology or general sociology

WMNST 466 (HIST 466) (US;IL)

Lesbian and Gay History (3) Critical exploration of the history of sexuality, focusing especially on the emergence of modern lesbian and gay identities.

Effective: Spring 2013

Prerequisite: WMNST 100 WMNST 117

WMNST 471 (PSYCH 479) (US)

The Psychology of Gender (3) Theories and research on gender differences and gender roles. Emphasis on women's and men's current positions in society.

Effective: Spring 2007

Prerequisite: PSYCH 100 PSYCH 221

WMNST 490 (ENGL 490) (US;IL)

Women Writers and Their Worlds (3) American and British literature written from the perspective of women.

Effective: Summer 2005

Prerequisite: ENGL 015 or ENGL 030

WMNST 499 (IL)

Foreign Studies (1-12) Courses offered in foreign countries by individual or group instruction.

Effective: Summer 2005

Writing Across the Curriculum

All course descriptions are updated periodically.

429 courses.

A E 481W

Comprehensive Architectural Engineering Senior Project I (4) Building project selection and preparation of overall plan; preliminary investigation of building design and construction issues; creation of individual Capstone Project Electronic Portfolio (CPEP) and project proposal required.

Effective: Fall 2005

Prerequisite: ARCH 441 fifth-year architectural engineering standing in major area of emphasis

A ED 201W

History and Philosophy of Art Education in Schools and Cultural Institutions (3) Introduction to historical, philosophical, and sociological foundations art education in schools and cultural institutions, museums, and community organizations.

Effective: Spring 2003

ACCTG 403W

Auditing (3) Financial, compliance, internal, and operational audits; standards and procedures; sampling; EDP auditing; professional issues; application of concepts through written responses.

Effective: Spring 2008

Prerequisite: ACCTG 371 or ACCTG 471

AE T 210W

Architectural Engineering Office Practice Using Writing Skills (3) Concepts, procedures, and writing-intensive activities to properly prepare site observation reports, cost estimates, contractual conditions, and outline and technical specification.

Effective: Spring 1994

Prerequisite: fourth-semester standing

AEE 330W

Communication in Agricultural and Natural Resource Careers (3) The course explores the conventions of writing and speaking found in agricultural professions through the use of case studies.

Effective: Summer 2013

Prerequisite: ENGL 015

AERSP 305W

Aerospace Technology Laboratory (3) Experiments in measurement systems, aerodynamics, aerospace structures, dynamics and control, and propulsion, technical report writing and presentations.

Effective: Spring 2007

Prerequisite: Prerequisite or concurrent: AERSP 301 AERSP 311 ENGL 202C

AF AM 213Y (HIST 213Y, WMNST 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.

Effective: Spring 2015

AF AM 445Y (LER 445Y, PL SC 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

AG 301W

Introduction to Agricultural Law (3) A survey of the legal system and legal issues that typically arise in agricultural and agribusiness situations.

Effective: Fall 1987

AG BM 308W

Strategic Decision Making in Agribusiness (3) Utilize case studies to investigate strategic decision making among agribusiness firms, highlighting how information and market power shape strategies.

Effective: Summer 2013

Prerequisite: AG BM 101 AG BM 102 AG BM 106

AGCOM 462W

Advanced Agricultural Writing (3) Practice in journalistic writing strategies to report scientific and technical information in the agricultural/environmental sciences to general audiences.

Effective: Summer 2013

Prerequisite: a grade of C or better required in COMM 260W or equivalent coursework

AGRO 410W

Physiology of Agricultural Crops (4) Study of the relation of plants to their environment and the physiology of crop plant growth.

Effective: Summer 2013

Prerequisite: AGRO 028

AM ST 100Y (GH;US)

Introduction to American Studies (3) A study of selected attempts to identify and interpret movements and patterns in American culture.

Effective: Spring 2006

Prerequisite: third-semester standing

AM ST 140Y (RL ST 140Y) (GH;US)

Religion in American Life and Thought (3) The function, contributions, tensions, and perspectives of religion in American culture.

Effective: Summer 2005

AM ST 491W

American Themes, American Eras (3-6) Interdisciplinary American culture course on major themes and eras such as the American Revolutionary Era or the 1930s.

Effective: Fall 2007

Prerequisite: seventh-semester standing

AN SC 290W

Careers in Animal Agriculture (1) A description and analysis of career opportunities in the animal sciences and allied industries.

Effective: Summer 2013

AN SC 419W

Applied Animal Welfare (3) Assessment of management practices impacting animal welfare; devoted to livestock species, companion animals, captive exotic species, and animals in research.

Effective: Summer 2013

Prerequisite: AN SC 201 or 6 credits of biology

AN SC 431W

Physiology of Mammalian Reproduction (4) Physiological processes of reproduction in animals, including the use of current and emerging technologies.

Effective: Summer 2013

Prerequisite: 3 credits in animal physiology

AN SC 467W

Equine Nutrition and Feeding (3) Equine gastrointestinal anatomy and physiology; energy and nutrient requirements for body functions; applied interrelationships between nutrition, health, and performance.

Effective: Summer 2013

Prerequisite: AN SC 301

ANTH 321W

Intellectual Background of Archaeology (3) Introduction to primary sources on the development of archaeology as a scientific discipline.

Effective: Spring 1995

Prerequisite: ANTH 002 ANTH 045

ANTH 426W

Archaeological Laboratory Analysis (3) Scientific laboratory methods used in the analysis of ceramic and lithic artifacts.

Effective: Summer 2004

Prerequisite: ANTH 007 ANTH 008 ANTH 009 or ANTH 011

ANTH 427W

Forensic Archaeology (3) Application of archaeological techniques to crime scene investigations, with practical experience in field and laboratory contexts.

Effective: Summer 2007

Prerequisite: ANTH 002

ANTH 476W (WMNST 476W)

Anthropology of Gender (3) Cross-cultural construction of gender and sex roles; theories of gender construction; case studies and practical effects.

Effective: Summer 2011

Prerequisite: 3 credits in women's studies or anthropology

APLNG 482Y (IL)

Introduction to Applied Linguistics (3) Application of theories of language to psycholinguistics, philosophy of language, anthropological linguistics, sociolinguistics, bi/multilingualism, second language acquisition and teaching.

Effective: Spring 2006

ARCH 311W

Architectural and Planning Theories (3) Architectural theory course with a strong focus on the reading and writing of essays about architecture and related fields.

Effective: Fall 2011

Prerequisite: ENGL 015 or ENGL 030 ; Students must also earn a C or better in: ARCH 210 and ART H 201 and ART H 202

ART 122Y (US)

Commentary on Art (3) An introduction to verbal commentary, both oral and written, about art. The development of critical and expressive skills given emphasis.

Effective: Spring 2006

ART 211Y (US)

Introduction to Digital Art and Design Criticism (3) An introduction to the language, aesthetics, and cultural impacts of digital art and design in contemporary society.
Effective: Spring 2010

ART 466W

Individual Approaches II (6) An advance studio/lecture addressing the preparation for potential employment and/or entrance into graduate studies.

Effective: Summer 2007

Prerequisite: ART 165 ART 166 ART 265 ART 266 ART 365 ART 366 ART 465

ART H 350W

Undergraduate Seminar in the History of Art (3-6) An introduction to original research, methodology, analysis, and writing on a scholarly level.

Effective: Summer 1992

Prerequisite: fifth-semester standing 6 credits in art history at the 300 level or above

ARTSA 402W

Strategic Management and Planning for the Arts (3) Study of strategic planning for commercial and non-profit arts organizations.

Effective: Summer 2012

Prerequisite: 7th semester standing and ARTSA 301 ARTSA 401 MKTG 301 ACCTG 211

ASIA 120Y (GH;IL)

South Asia: A Literary History (3) The course traces the cultural history of South Asia by studying its literary tradition from ancient to modern times.

Effective: Summer 2014

ASIA 404Y (CMLIT 404Y) (IL)

Topics in Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan, taught with focus on written analysis and interpretation.

Effective: Summer 2013

ASIA 405Y (IL)

Seminar in Asian Studies (3-6 per semester/maximum of 6) An advanced, writing-focused seminar in Asian Studies.

Effective: Fall 2009

Prerequisite: ASIA 100

ASIA 465Y (PL SC 465Y) (IL)

Democratization in Asia (3) A course which identifies components of democracy, such as definitions, measures, datasets, and the democratization process.

Effective: Spring 2016

Prerequisite: PL SC 003 or ASIA 100

ASIA 475Y (HIST 475Y) (IL)

The Making and Emergence of Modern India (3) India's transition to social, economic, and political modernity through the experience of British colonial rule and the nationalist struggle.

Effective: Spring 2015

Prerequisite: HIST 010 HIST 011 HIST 172 HIST 175 HIST 176 HIST 181 or HIST 191

ASIA 484Y (HIST 484Y) (IL)

History of Chinese Thought (3) A study of the dynamic historical development of Chinese thought with its diverse expressions from antiquity to the present.

Effective: Fall 2014

Prerequisite: HIST 174 or HIST 175

ASIA 485Y (HIST 485Y) (IL)

China's Last Empire: The Qing Dynasty, 1644-1911 (3) China from 1644 founding of Qing dynasty to 1911 fall; Chinese society and institutions, imperialism and China's internal diversity.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H

ASTRO 402W

Astronomical Telescopes, Techniques, and Data Analysis (3) Properties and use of optical telescopes, imaging and spectroscopy, multi-wavelength techniques, data analysis and statistics, practical research methods.

Effective: Fall 2016

Prerequisite: ASTRO 001 or ASTRO 005 or ASTRO 006 or ASTRO 010 and ASTRO 011 or ASTRO 291 ; MATH 140

ASTRO 420W

Planets and Planetary System Formation (3) Solar system properties, star formation, protoplanetary disks and planet formation, solar system model, extrasolar planets, and astrobiology.

Effective: Summer 2004

Prerequisite: ASTRO 292

ASTRO 475W

Stars and Galaxies (3) Astronomical studies concerning the distribution and evolution of stars and gas in our and other galaxies.

Effective: Fall 1993

Prerequisite: ASTRO 292

B A 364Y (US;IL)

International Business and Society (3) Business organizations and the sociocultural environment; current issues; corporate responsibility; international and multinational business environments.

Effective: Spring 2008

Prerequisite: ENGL 202D MGMT 301

B A 422W

Strategic Business Planning (3) Study of strategic planning and implementation in multi-industry, multi-cultural, and multi-national settings with emphasis on sustaining competitive advantages.

Effective: Fall 2012

Prerequisite: B A 321 ; B A 322 ; B A 421 ; FIN 301 ; MGMT 301 ; MKTG 301 ; SCM 301

B E 466W

Biological Engineering Design II (3) Part two of a two course sequence; culminating design experience with projects in agricultural, food and biological processing, and natural resource engineering.

Effective: Spring 2016

Prerequisite: B E 460

B M B 443W

Laboratory in Protein Purification and Enzymology (3) Laboratory in protein isolation methodology, enzyme kinetics, and physico-chemical properties of proteins.

Effective: Spring 2009

Prerequisite: B M B 442 B M B 401

B M B 445W

Laboratory in Molecular Genetics I (2) Laboratory in molecular techniques in gene analysis and microbial genetics, emphasizing in vitro methodologies.

Effective: Spring 2009

Prerequisite: B M B 442 B M B 400 MICRB 202

BB H 301W

Values and Ethics in Biobehavioral Health Research and Practice (3) Examines bases for choices among values in personal and professional relations in human development processes and supporting services.

Effective: Fall 2016

Prerequisite: BB H 101

BB H 411W

Research and Applications in Biobehavioral Health (3) Research methods, multi-level analyses, and applications in biobehavioral health.

Effective: Spring 2011

Prerequisite: BB H 101 BB H 310 STAT 200

BE T 204W

Medical Equipment and Systems II (5) Principles of medical equipment: operation, application; circuit and block diagrams; preventive maintenance inspections; and troubleshooting with report writing and presentations.

Effective: Fall 2008

Prerequisite: BE T 201 BE T 205

BIOL 220M (GN)

Honors Biology: Populations and Communities (4) Honors study of the major physical, chemical, and biological factors constituting environment and their dynamic interaction with organisms forming ecosystems.

Effective: Summer 2005

Prerequisite: BIOL 110

BIOL 220W (GN)

Biology: Populations and Communities (4) A study of the structures and functions of organismic interactions from simple populations to complex ecosystems. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.

Effective: Fall 2004

Prerequisite: BIOL 110

BIOL 230M (GN)

Honors Biology: Molecules and Cells (4) Honors study of cellular phenomena including molecular genetics and metabolic interactions.

Effective: Summer 2007

Prerequisite: BIOL 110 CHEM 110

BIOL 230W (GN)

Biology: Molecules and Cells (4) A study of cellular phenomena including molecular genetics and metabolic interactions. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.

Effective: Summer 2007

Prerequisite: BIOL 110 CHEM 110

BIOL 240M (GN)

Honors Biology: Function and Development of Organisms (4) Honors study of development and physiological processes at the organismic level. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.)

Effective: Summer 2007

Prerequisite: BIOL 110 CHEM 110

BIOL 240W (GN)

Biology: Function and Development of Organisms (4) A study of development and physiological processes at the organismic level. (BIOL 220W, 230W, and 240W each carry only 1 credit of "writing"; all three courses must be taken to meet the writing requirement.) BIOL 220W GN, 230W GN, and 240W GN each carry only 1 credit to "Writing"; all three courses must be taken to meet the W requirement.

Effective: Summer 2007

Prerequisite: BIOL 110 CHEM 110

BIOL 402W

Biological Experimental Design (3) Discussion of experimental design, analysis and presentation, with a practicum providing for student design, analysis and presentation of biological experiments. Students may not take this course if they have taken BIOBD 350W.

Effective: Fall 2007

Prerequisite: at least two of the following three courses: BIOL 220W BIOL 230W BIOL 240W ; STAT 250

BIOL 450W

Experimental Field Biology (3-5) A practical introduction to modern experimental techniques for ecological study of terrestrial, marine, and fresh water habitats.

Effective: Fall 2007

Prerequisite: BIOL 220W BIOL 240W

BME 450W

Biomedical Senior Design (3) Team based capstone design course with open ended project for industry or clinical applications related to Biomedical Engineering.

Effective: Fall 2014

Prerequisite: BME 401 BME 403 BME 440 ENGL 202C 7th semester standing

BRS 429W

Biorenewable Systems Analysis and Management (3) Theory of systems thinking; optimization and quantitative techniques for analysis of agricultural production and other biorenewable systems.

Effective: Spring 2014 Ending: Fall 2016

Prerequisite: BRS 422 ; or concurrent A S M 425 or W P 417

BRS 429W

Biorenewable Systems Analysis and Management (3) Theory of systems thinking; optimization and quantitative techniques for analysis of agricultural production and other biorenewable systems.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: BRS 422

C E 333W

Construction Management I (3) Components of a construction organization, managerial terminology and documents, labor laws and relations, insurance and safety.

Effective: Spring 2008

C E 410W

Sustainable Residential Subdivision Design (3) Residential subdivision process; site selection; conservation and neo-traditional design; utility design and layout; best management practices for erosion and stormwater.

Effective: Fall 2001

Prerequisite: A E 372 or C E 332 ; seventh-semester standing in Architectural or Civil Engineering

C E 421W

Transportation Design (3) Design of streets and highway facilities; emphasis on geometric elements, intersections and interchanges, roadway drainage, and pavement design.

Effective: Spring 2002

Prerequisite: C E 321

C E 438W

Construction Engineering Capstone Design (3) Construction project integrating geotechnical reports; materials specifications; quality control; equipment; estimation; scheduling; design details: excavations, foundations, retaining walls, formwork, pavements.

Effective: Fall 2007

Prerequisite: C E 432 and C E 435 or C E 436

C E 439W

Geotechnical and Materials Engineering Design Capstone (3) Subsurface site evaluation; integrated design of retaining walls, foundations, pavements, and materials for airports, highways, dams, or other facilities.

Effective: Spring 2013

Prerequisite: C E 435 and either C E 436 or C E 437

C E 448W

Advanced Structural Design (3) Wind, snow, seismic, bridge loads; building design using steel, concrete, and prestressed concrete; advanced steel connections; capstone project; computer applications.

Effective: Spring 2013

Prerequisite: C E 342 C E 441 ; Prerequisite or concurrent: ENGL 202C

C E 465W

Water Resources Capstone Course (3) Hydraulic design of river structures and open channels including supercritical and spatially varied flow; hydrologic/hydraulic computer modeling; design project.

Effective: Spring 2010

Prerequisite: C E 461 . Prerequisite or concurrent: C E 462

C E 472W

Environmental Engineering Capstone Design (3) Principles and design of unit operations for water; domestic and industrial wastewater treatment; equipment selection and application.

Effective: Spring 2002

Prerequisite: C E 370 C E 371

C I 412W

Secondary Teaching (3) Study of the teacher's responsibilities, steps in planning instruction, and various strategies for implementing and assessing teaching.

Effective: Spring 2007

Prerequisite: C I 295 EDPSY 014 EDTHP 115

CAMS 109Y (GH;IL)

Writing Systems of the World (3) Writing intensive overview of the world's writing systems throughout history.

Effective: Spring 2007

CAMS 400W

Comparative Study of the Ancient Mediterranean World (3) Comparative study of ancient Mediterranean civilizations.

Effective: Spring 2001

Prerequisite: 3 credits in Classics and Ancient Mediterranean Studies

CAMS 411W

Classical Drama (3) Masterpieces of Greek tragedy (Aeschylus, Sophocles, Euripides) and comedy (Aristophanes, Menander); their influence on Roman writers.

Effective: Spring 2001

CAMS 425W (J ST 425W, RL ST 425W)

Books of the Bible: Readings and Interpretation (3 per semester/maximum of 12) Study of a biblical book/topic in terms of literary, historical, and cultural contexts, history of interpretation, and critical scholarship.

Effective: Summer 2015

Prerequisite: 3 credits in CAMS or J ST or RL ST recommended CAMS/J ST/RL ST 110 or 120; or ENGL 104.

CAMS 440W

Studies in Classical and Ancient Mediterranean Archaeology (3-6) Selected topics in the literary sources and material evidence for classical and ancient Mediterranean society.

Effective: Summer 2000

Prerequisite: 3 credits from: ANTH 002 ART H 311 CAMS 010 CAMS 020 CAMS 025 CAMS 033 CAMS 140 CAMS 150 HIST 100 HIST 101

CAMS 450W (WMNST 450W) (IL)

Gender and Sexuality in Ancient Greece and Rome (3) An examination of gender, sexuality, and sexual desire in ancient Greece and Rome.

Effective: Spring 2016

Prerequisite: 3 credits in CAMS

CAS 214W

Speech Writing (3) Writing speeches for delivery in political, professional, and ceremonial settings; emphasis on composition and language for oral presentation.

Effective: Spring 2003

Prerequisite: CAS 100

CAS 280W

Storytelling and Speaking (3) Principles of oral performance from storytelling to the printed page; includes oral performance of stories, speeches, prose, drama, and poetry.

Effective: Spring 2003

CAS 426W

Communication Ethics (3) Ethical issues in public and private communication; role of communication in expressing and realizing individual and social values.

Effective: Spring 2003

Prerequisite: CAS 100

CAS 450W

Group Communication Theory and Research (3) Selected theories of problem solving through group discussion emphasizing participation and leadership.

Effective: Spring 2003

Prerequisite: CAS 100 or CAS 250

CAS 452W

Organizational Communication Theory and Research (3) Explores the nature and functions of communication in organizations; emphasis on writing and exploring concepts, tools, and skills for effective management of communication.

Effective: Spring 2004

Prerequisite: CAS 202 or CAS 252

CC 490W

Seminar in Corporate Communication (3) Explores and applies concepts and theories to various cases, emphasizing written development of strategies relevant to the internal and external organization.

Effective: Fall 2016

Prerequisite: CC 200 and Fifth semester standing

CED 427W

Society and Natural Resource (3) Analysis of the relationships between societal development and enhancement and natural resources.

Effective: Fall 2015

Prerequisite: R SOC 001 or SOC 001 and ENGL 202

CH E 480M

Chemical Engineering Laboratory (Honors) (3) Data interpretation and analysis from student-operated experiments on pilot-plant equipment. Individual written and oral technical reports.

Effective: Fall 2013

Prerequisite: ENGL 202C CH E 320 CH E 330 CH E 350

CH E 480W

Chemical Engineering Laboratory (3) Data interpretation and correlation from student-operated experiments on pilot-plant equipment. Individual written and oral technical reports.

Effective: Fall 2013

Prerequisite: ENGL 202C CH E 320 CH E 330 CH E 350

CHEM 213M

Laboratory in Organic Chemistry - Honors, Writing Intensive (2) Basic laboratory techniques learned in context via theme-based modules, spectral analysis, multi-step synthesis, and professional scientific writing. Because of similarity of subject matter, students may not receive credit for both CHEM 203 and CHEM 213.

Effective: Spring 2015

Prerequisite: CHEM 210 and prerequisite or concurrent: CHEM 212

CHEM 213W

Laboratory in Organic Chemistry - Writing Intensive (2) Basic laboratory techniques learned in context via theme-based modules, spectral analysis, multi-step synthesis, and professional scientific writing. Because of similarity of subject matter, students may not receive credit for both CHEM 203 and CHEM 213.

Effective: Spring 2015

Prerequisite: CHEM 210 and prerequisite or concurrent: CHEM 212

CHEM 423W

Chemical Spectroscopy (4) Modern methods and instruments of spectroscopy and their applications to problems of chemical structure and analysis.

Effective: Fall 2014

Prerequisite: CHEM 227 or CHEM 221 CHEM 450 or prerequisite or concurrent: CHEM 452

CHEM 425W

Chromatography and Electrochemistry (4) Gas, liquid, and other forms of chromatography; important techniques of electrochemistry.

Effective: Fall 2015

Prerequisite: CHEM 227 or CHEM 221 CHEM 450

CHEM 427W (FRNSC 427W)

Forensic Chemistry (4) Analytical and instrumental methods used in the forensic sciences with special emphasis on the analysis and characterization of trace evidence.

Effective: Fall 2012

Prerequisite: CHEM 213 CHEM 227 and FRNSC 411 or CHEM 431W

CHEM 431W

Organic and Inorganic Preparations (4) Preparation, purification, and characterization of both organic and inorganic compounds by modern methods.

Effective: Fall 2010

Prerequisite: CHEM 213

CHEM 459W

Advanced Experimental Physical Chemistry (4) Laboratory experiments and projects for students interested in advanced study in physical chemistry.

Effective: Summer 2010

Prerequisite: CHEM 450 CHEM 457 Prerequisite or concurrent: CHEM 452

CHNS 120W (GH)

Introduction to Chinese Literature and Culture (3) An introduction to Chinese histories and societies through literature and visual culture. Readings drawn from both classical and modern traditions, covering the period from the 11th century B.C. to the contemporary era.

Effective: Summer 2013

CHNS 403W

Level Four Chinese A (4) Continuation of CHNS 402. Aims to improve students' proficiency in all four language skills, with a special emphasis on writing.

Effective: Fall 2012

Prerequisite: CHNS 402

CMLIT 400Y (US;IL)

Senior Seminar in Literary Criticism and Theory (3) Discussions of theories of literature, of literary criticism, and particularly of the distinct methods of comparative study; individual projects.

Effective: Spring 2006

Prerequisite: seventh-semester standing; 18 credits in literature

CMLIT 401Y (IL)

The Western Literary Heritage I (3) Major literary movements and authors in the literature of the Western world from the beginnings through the early Renaissance.

Effective: Spring 2006

Prerequisite: 3 credits in literature or history

CMLIT 402Y (US;IL)

The Western Literary Heritage II (3) Major literary movements and authors in the literature of the Western world from the late Renaissance to the present time.

Effective: Spring 2006

Prerequisite: 3 credits in literature or history

CMLIT 404Y (ASIA 404Y) (IL)

Topics in Studies of Asian Literature (3) Selected works from the major poetry, fiction, and drama of such countries as India, China, Japan, taught with focus on written analysis and interpretation.

Effective: Summer 2013

Prerequisite: 3 credits in literature or related field appropriate to this course

COMPEN 352W

Embedded Systems Design (3) Design/development of embedded systems for data acquisition, process control, and special-purpose computing systems; peripheral interfacing, serial/parallel communications and bus systems.

Effective: Spring 2012

Prerequisite: COMPEN 351 or COMPEN 472 ; E E 210

COMPEN 482W

Computer Engineering Project Design (3) Computer engineering design project, project management, documentation, reporting, and group and individual communication skills.

Effective: Spring 2008

Prerequisite: E E 310 ; E E 353 ; CMPSC 473 ; ENGL 202C

COMPSC 431W

Database Management Systems (3) Topics include: conceptual data modeling, relational data model, relational query languages, schema normalization, database/Internet applications, and database system issues.

Effective: Fall 2013

Prerequisite: COMPSC 221 ; ENGL 202C

COMPSC 483W

Software Design Methods (3) Applications of scientific knowledge and methods in the design and construction of computer software using engineering concepts.

Effective: Spring 2008

Prerequisite: COMPSC 221 ; COMPSC 465 ; ENGL 202C

COMPSC 485W

Computer Science Senior Project II (3) Computer science capstone project with documentation emphasis.

Effective: Spring 2008

Prerequisite: COMPSC 484

COMPSC 487W

Software Engineering and Design (3) Software development process, life cycle; requirements analysis, specification, design, prototyping, testing, project management, and documentation.

Effective: Spring 2014

Prerequisite: ENGL 202C COMPSC 221 COMPSC 462

COMM 230W

Writing for Media (3) The application of creativity to the practical concerns of narrative script and radio/television spot writing.

Effective: Spring 2008

Prerequisite: ENGL 015 and ENGL 202

COMM 260W

News Writing and Reporting (3) News and news values; legal and ethical problems of reporting; writing and reporting news for the mass media.

Effective: Spring 2004

Prerequisite: ENGL 015 or ENGL 030 ; COMM 160 ; third-semester standing and typing proficiency

COMM 283W

Television Studio Production (3) Students will learn the technical aspects of multi-camera studio television production.

Effective: Spring 2012

Prerequisite: COMM 282 or COMM 242

COMM 342W

Idea Development and Media Writing (3) Introduction to various modalities of idea development and written expression for media production.

Effective: Spring 2011

Prerequisite: COMM 242 and Film-Video Major

COMM 413W

The Mass Media and the Public (3) Social-level and political theories of the relationships between media and public; media influences on public opinion; social pressure on the media; political communications.

Effective: Spring 2011

Prerequisite: select 3 credits from the following COMM 100 COMM 118 COMM 150 COMM 180 COMM 251 COMM 260W COMM 320 or COMM 370 and select 3 credits from the following: COMM 304 COMM 420

COMM 421W

Advertising Creative Strategies (3) Planning, designing, writing advertisements; introduction to graphics and production techniques and processes; layout and copywriting practice and critiques.

Effective: Spring 2004

Prerequisite: COMM 320

COMM 460W

Reporting Methods (3) Techniques in reporting news and trends at the local, regional, and county levels. Emphasis on both deadline and interpretive reporting.

Effective: Fall 1990

Prerequisite: COMM 260W

COMM 464W

Editorial, Opinion and Commentary Writing (3) Introduces techniques of editorial, opinion and commentary writing.

Effective: Spring 2008

Prerequisite: COMM 260W

COMM 486W

Telecommunications Ethics (3) Drawing on normative theory and political philosophy, this course explores problems in ethics and social responsibility in telecommunications.

Effective: Fall 2016

Prerequisite: COMM 180 COMM 280 COMM 380 ; or permission of the program

COMM 487W

Advanced Telecommunications Management and Leadership (3) Strategic management, leadership and ethics issues including marketing, financing, entrepreneurship, and innovation.

Effective: Fall 2016

Prerequisite: COMM 180 COMM 280 COMM 380 ; or permission of the program

COMM 489W

Advanced Telecommunications Topics (3) Exploration of advanced topics related to the telecommunications industries.

Topic varies by section.

Effective: Spring 2016

Prerequisite: COMM 180 COMM 280 COMM 380 ; or permission of the program

CRIM 250W (CRIMJ 250W)

Research Methods in Criminal Justice (3) Fundamental concepts of social science research including design, measurement, sampling, and interpretation of the study of crime, law, and justice.

Effective: Fall 2011

Prerequisite: CRIM 012

CRIMJ 240W

Field Research in the Criminal Justice (4) Field research and observational strategies appropriate to the identification, investigation, and analysis of research questions in criminal justice.

Effective: Spring 2008

Prerequisite: CRIMJ 100

CRIMJ 250W (CRIM 250W)

Research Methods in Criminal Justice (3) Fundamental concepts of social science research including design, measurement, sampling, and interpretation of the study of crime, law, and justice.

Effective: Fall 2011

Prerequisite: CRIMJ 012

CRIMJ 424W

Drugs and Crime (3) Analysis of international narcotics trafficking in the twentieth century.

Effective: Spring 2008

Prerequisite: CRIMJ 100

CRIMJ 441W

The Juvenile Justice System (3) Historical and contemporary view of the juvenile justice system. Focus on analyzing components of the system, their interactions, processing, and handling of youths.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or permission of program

CRIMJ 450W

Senior Seminar (3 per semester/maximum of 6) Capstone course exploring past, current and future developments in criminal justice.

Effective: Spring 2008

Prerequisite: CRIMJ 100 or CRIM 100 and sixth semester standing or permission of program.

CRIMJ 489W

Victimology: Predatory Crime (3) This course uses medical, social scientific and legal research to study the complexities of predatory crime.

Effective: Spring 2004

Prerequisite: CRIMJ 407

CSD 459W

Principles of Clinical Management in Communication Disorders (3) Survey of principles and practices for diagnosing, interviewing, counseling, treating, reporting, and programming in Communication Disorders.

Effective: Fall 2010

Prerequisite: CSD 300 CSD 230 plus 3 additional credits in CSD at the 300-level

D S M 295W

Professional Staff Field Experience (4) Methods of, and practice in, the client-oriented dietetic systems.

Effective: Summer 2011

Prerequisite: D S M 195 ; NUTR 251

DS 340W

Applied Data Sciences (3) This project-based course has students apply principles of data sciences to solving real-world problems while developing and demonstrating writing abilities.

Effective: Spring 2016

Prerequisite: DS 300 DS 310 DS 330

E B F 304W

Global Management for the Earth, Energy, and Materials Industries (3) This class is designed to introduce students to modern management and organization strategies for resource businesses.

Effective: Fall 2010

Prerequisite: E B F 200

E E 300W

Design Process (3) Introduction to the electrical engineering design process, project teaming and management, and technical communication.

Effective: Summer 2012

Prerequisite: E E 200

E E 313W

Electronic Circuit Design II (4) Design/analysis of electronics circuits including: single/multistage transistor amplifiers, op amp circuits, feedback amplifiers, filters, A/D and D/A converters.

Effective: Spring 2008

Prerequisite: E E 310

E E 403W

Capstone Design (3) Design projects in the various areas and subdisciplines of electrical engineering, with an emphasis on technical communication skills.

Effective: Fall 2015

Prerequisite: E E 300W ; ENGL 202C

E E 406W

Electrical Engineering Capstone Design (3) Project designs of analog and digital systems, interfacing, and relevant electronic circuits, with an emphasis on technical communications skills.

Effective: Fall 2012

Prerequisite: E E 405

E R M 413W

Case Studies in Ecosystem Management (3) Application of biological, physical, and social science principles to ecosystem management problems; introduction to environmental impact analysis and review.

Effective: Spring 2010

Prerequisite: BIOL 220W SOILS 101 . Prerequisite or concurrent: E R M 412

E SC 261M

Computational Methods in Engineering (3) Computational methods for solving engineering problems using C++ and MATLAB. Reports on root finding, systems of algebraic equations.

Effective: Spring 2014

Prerequisite: or concurrent: MATH 141

E SC 414M

Elements of Material Engineering (3) Structure and imperfections in engineered materials; their influence on properties, behavior, and processing. Applications of metals, ceramics, polymers, and composites.

Effective: Spring 2008

Prerequisite: E MCH 213 E MCH 210H or E MCH 210 . Prerequisite or concurrent: E SC 312 or PHYS 237

ECON 400M

Honors Seminar in Economics (3-12) Readings, discussion, and oral and written reports on selected topics in economics.

Effective: Fall 2016

Prerequisite: ECON 302 and ECON 304 and fifth-semester standing and admission into the Economics Department Honors Program.

ECON 404W

Current Economic Issues (3) An analytical survey of significant problems of current economic policy and the application of economic analysis to important social issues.

Effective: Spring 1993

Prerequisite: ECON 302 or ECON 304

ECON 406W

The Economics of Social Conflict (3) Economic theory of the resolution of social conflicts: social choice theory, voting, noncooperative games, voluntary trade, and allocation by force.

Effective: Summer 2008

Prerequisite: ECON 402 and MATH 110 or MATH 140

ECON 407W

Political Economy (3) Applications of the tools of game theory to analyze topics in collective decision making.

Effective: Summer 2008

Prerequisite: ECON 402

ECON 408W

Intellectual Property (3) A comparative and cost-benefit analysis of intellectual property that examines patents, copyrights, government supported research, and prizes.

Effective: Summer 2008

Prerequisite: ECON 402 or ECON 444

ECON 409W

Economics of Terrorism (3) Terrorism throughout history; economic causes, costs, sources, and consequences.

Effective: Summer 2008

Prerequisite: ECON 402

ECON 411W

Behavioral Economics (3) Topics in behavioral economics; selected games; evolutionary models of social behavior; culture and social behavior; herding; overconfidence.

Effective: Summer 2008

Prerequisite: ECON 402 or ECON 444

ECON 413W

Economic Growth and the Challenge of World Poverty (3) Economic prosperity in historical perspective; recent successes (East Asia, China, India); ongoing challenges (the bottom billion; sub-Saharan Africa).

Effective: Summer 2008

Prerequisite: ECON 471

ECON 415W

The Economics of Global Climate Change (3) Evidence on climate change; economic models of the environment and market failure; cost-benefit analysis of policy options; carbon markets.

Effective: Summer 2008

Prerequisite: ECON 428

ECON 417W

The Economics of Uncertainty (3) Uncertainty is examined in contracts, with an emphasis on limited liability. Asymmetric information and economic puzzles are also considered.

Effective: Summer 2008

Prerequisite: ECON 402 or ECON 444

ECON 422W

Applying Monetary Theory to Monetary History (3) Monetary history is examined. Special attention is paid to commodity-based systems, private money, and government monopolies on currency.

Effective: Summer 2008

Prerequisite: ECON 451

ECON 436W (US)

Economics of Discrimination (3) Analysis of the economic characteristics of women and minorities, with examination of race and sex discrimination and related government policies.

Effective: Fall 2007

Prerequisite: ECON 302 or ECON 315

ECON 437W

Multinationals and the Globalization of Production (3) This course will focus on trade, multinationals and offshoring, and explore their implications for the U.S. and developing countries.

Effective: Summer 2008

Prerequisite: ECON 433

ECON 438W

Winners and Losers from Globalization (3) The economic effects of globalization on individuals, governments, nation-states and business.

Effective: Summer 2008

Prerequisite: ECON 433 and ECON 490

ECON 445W (H P A 445W)

Health Economics (3) Economic analysis of U.S. health care system; planning, organization, and financing; current public policy issues and alternatives.

Effective: Spring 2008

Prerequisite: ECON 302 ECON 315 or ECON 323

ECON 446W

Economics of Industry Evolution (3) Dynamics of industry evolution; empirical evidence and theoretical modeling of firm entry, growth, and exit; entrepreneurship; investment and strategic behavior.

Effective: Summer 2008

Prerequisite: ECON 444 and ECON 490

ECON 447W

Economics of Sports (3) Examination of economic issues pertaining to professional and collegiate sports, including analysis of industrial organization, labor markets, and local economies.

Effective: Spring 2009

Prerequisite: ECON 302 and ECON 490

ECON 448W

Economics of Auctions and Procurements (3) Theoretical and empirical analyses of auctions and procurements; different modeling environments; econometric analysis of auction and procurement data.

Effective: Summer 2008

Prerequisite: ECON 402 or ECON 444 and ECON 490

ECON 449W

Economics of Collusion (3) Theoretical and empirical analysis of collusion among firms, case studies of cartel behavior, bidding behavior at auctions and procurements.

Effective: Spring 2008

Prerequisite: ECON 302 or ECON 342 and ECON 490 or permission of instructor

ECON 452W

Financial Crises (3) Examination of causes and consequences of financial crises; asset pricing theory, market efficiency, speculative bubbles; policy considerations.

Effective: Summer 2008

Prerequisite: ECON 451

ECON 455W

Economics of the Internet (3) Economics of the Internet; electronic commerce and network economics; pricing issues; intellectual property.

Effective: Summer 2008

Prerequisite: ECON 402 or ECON 444

ECON 457W

Economics of Organizations (3) An advanced course in the economics of organizations. The focus is on coordination, incentives, contracts, and information in corporations.

Effective: Summer 2008

Prerequisite: ECON 402 or ECON 444

ECON 463W

Economic Demography (3) Microeconomics of demographic behavior; interrelationships between demographic and economic factors, in developing and industrialized economies; economic welfare and policy implications.

Effective: Summer 2008

Prerequisite: ECON 412 or ECON 471 or 9 credits in demography

ECON 465W

Cross Sectional Econometrics (3) Discrete choice models, censored and truncated regression models, longitudinal models, applications.

Effective: Summer 2008

Prerequisite: ECON 302 and ECON 490

ECON 466W

Panel Data Models (3) Random and fixed effects, endogeneity, balanced and unbalanced panels, censoring of spells, differences in differences, applications.

Effective: Summer 2008

Prerequisite: ECON 302 and ECON 490

ECON 475W

Migration and Development (3) Human Capital Approach to Migration; Economics of Family Migration; Evidence: Micro and Macro Perspectives; Migration Policies.

Effective: Summer 2008

Prerequisite: ECON 471 or ECON 412 ; ECON 490

ECON 479W

Economics of Matching (3) Economic application of matching to employment, marriage, organ markets, and medical residents.

Effective: Summer 2008

Prerequisite: ECON 402 or ECON 412 or ECON 444

ECON 489M

Honors Thesis (1-6) No description.

Effective: Spring 1993

Prerequisite: ECON 302 ECON 304 and admission into the departmental honors program

EDSGN 460W

Multidisciplinary Capstone Design Project (3 per semester/maximum of 6) Course provides multidisciplinary industry-sponsored and service-based senior design projects in conjunction with the Learning Factory.

Effective: Fall 2014

Prerequisite: BIO E CH E CMPEN E E I E or M E; BME 440 or E E 300W or I E 302 I E 305 I E 323 I E 327 I E 330 I E 405 or M E 340

EDUC 315W (US)

Social and Cultural Factors in Education (3) Critical examination of how different experiences linked to race, ethnicity, religion, gender, and sexual orientation influence education.

Effective: Spring 2011

Prerequisite: admission into Elementary Education Major or Secondary Teacher Certification Program

EDUC 470W

Higher-Order Thinking for Educators (3) Presentation of strategies, techniques, and principles of higher-order thinking which are grounded in relevant research and practice will be presented.

Effective: Fall 2006

Prerequisite: admission into Elementary Education Major

EET 212W

Op Amp and Integrated Circuit Electronics (4) Analysis and design of amplifier, rectifier, filter, comparator, oscillator, and other practical circuits using op amps and integrated circuit devices.

Effective: Fall 2012

Prerequisite: EET 114 ENGL 015 MATH 022 or MATH 040 or MATH 082

EET 213W

Fundamentals of Electrical Machines Using Writing Skills (5) AC and DC machinery principles and applications; introduction to magnetic circuits, transformers, and electrical machines including laboratory applications.

Effective: Fall 2007

Prerequisite: EET 114 EET 118 ENGL 015

EET 420W

Electrical Design Project (3) Design, construction, and testing of a project either selected by the students with approval or assigned by the instructor.

Effective: Spring 2008

Prerequisite: EET 312 EET 331 EET 419 ENGL 202C

EET 490W

Electrical/Computer Senior Design Project (3) Individual or group design projects in electrical and computer engineering technology.

Effective: Spring 2015

Prerequisite: EET 480

EGEE 411W

Energy Science and Engineering Lab (3) A comprehensive introduction to classic and modern laboratory skills and experimentation of relevance to energy science and engineering practice.

Effective: Spring 2015

Prerequisite: F SC 401 or EGEE 302 or permission of program

EGEE 464W

Energy Design Project (3) A team and capstone design project on an industrial energy-related problem.

Effective: Spring 2008

Prerequisite: seventh-semester standing in energy engineering or chemical engineering ENGL 202C

ELEDM 395W

Field Experience for Urban Teacher Preparation (2 per semester, maximum of 6) Structured opportunities for investigating and understanding the work of teachers within urban schools and communities.

Effective: Spring 2005

Prerequisite: C I 295 EDPSY 014 EDTHP 115

EM SC 470W

Undergraduate Collaborative Research in Earth and Materials Sciences (1-6 per semester/maximum of 6)

Interdisciplinary research seminar involving students in the process of discovery, writing, and debate on issues of broad interest to Earth and Materials Sciences.

Effective: Spring 2013

ENGL 001W (GH)

Understanding Literature (3) Studies the various critical ways of reading, understanding, and writing about fiction, poetry, and drama.

Effective: Spring 1999

ENGL 200W

Introduction to Critical Reading (3) Responses to a variety of literary texts written in English that evoke different approaches.

Effective: Fall 2001

Prerequisite: 6 credits of ENGL ENLSH or LIT

ENGL 211W

Introduction to Writing Studies (3) This course introduces students to the most salient issues and theories in writing studies. Students explore contemporary theories and issues about writing in order to understand writing as a skill and a complex object of study in various professional contexts.

Effective: Summer 2010

Prerequisite: ENGL 015 or ENGL 030 ; third semester standing

ENGL 221W

British Literature to 1798 (3) Introduction to literary history and analysis. Beowulf and writers such as Chaucer, Shakespeare, Donne, Milton, Swift, Pope, and Fielding.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 222W

British Literature from 1798 (3) Introduction to literary history and analysis. Writers such as Austen, Wordsworth, Keats, Browning, Dickens, the Brontës, Yeats, Joyce, and Woolf.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 231W

American Literature to 1865 (3) Introduction to literary history and analysis. Writers such as Bradstreet, Franklin, Emerson, Hawthorne, Douglass, Thoreau, Fuller, Melville, Whitman, and Dickinson.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 232W

American Literature from 1865 (3) Introduction to literary history and analysis. Writers such as Mark Twain, James, Cather, Frost, O'Neill, Faulkner, Hemingway, Hughes, and Morrison.

Effective: Summer 1992

Prerequisite: ENGL 015 or ENGL 030

ENGL 300M

Honors Course in English (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 1997

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 301M

Honors Seminar in English: Literature Before 1800 (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 2005

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 302M

Honors Seminar in English: Literature After 1800 (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 2005

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 303M

Honors Seminar in English: American Literature & Culture (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 2005

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 304M

Honors Seminar in English: Creative Writing (3-12) Reading, group discussions, and oral and written reports on various specific authors and literary works.

Effective: Fall 2005

Prerequisite: ENGL 015 or ENGL 030 ; approval of the departmental Honors Committee

ENGL 401W

Creative Writing Theory (3) Theories of art and creativity which inform the making of literary works.

Effective: Fall 2007

Prerequisite: ENGL 200 ; ELISH 201 ELISH 209 ENGL 212 or ENGL 213

ENGL 482W

Contemporary Literary and Cultural Theory (3) Contemporary literary and cultural theories and their implication for critical practice as applies to a variety of texts, e.g. literary, linguistic, visual, multimedia, and/or popular.

Effective: Fall 2007

Prerequisite: ENGL 015 or ENGL 030H ; ENGL 200

ENGL 487W

Senior Seminar (3) Issues, themes, periods, critical theories, etc., that invite students to use prior English studies, limited to seniors majoring in English.

Effective: Summer 1997

Prerequisite: six credits of 400-level courses in English

ENGR 320Y (GS;US;IL)

Design for Global Society (3) An interdisciplinary study of the engineering design process and the influence of society and culture on design.

Effective: Spring 2012

Prerequisite: ENGL 202

ENGR 490W

Senior Design I (1) Analysis of environmental impacts on a design, designing products for the global environment and discussion on engineering ethics and professionalism.

Effective: Fall 2012

Prerequisite: Prerequisite or concurrent: ENGR 350 E MCH 407 E MCH 461 or M E 461

ENGR 491W

Senior Design II (3) Capstone of research projects from conception to prototype through industry sponsored collaboration on common technical interests between faculty and student.

Effective: Summer 2010

Prerequisite: ENGR 490W

ENT 402W (VB SC 402W)

Biology of Animal Parasites (3) An introduction to animal parasitology. Emphasizes placed on host/parasite interactions, parasites of zoonotic importance, control programs and taxonomy.

Effective: Spring 2010

Prerequisite: BIOL 110

ENVE 301W

Environmental Microbiology (3) Fundamentals of microbial ecology and environmental microbiology with an emphasis on aspects of these fields important to environmental engineers.

Effective: Fall 2011

Prerequisite: CHEM 110 and CHEM 111

ENVE 413W

Operation and Control of Treatment Systems (3) Wastewater treatment, water treatment, solids handling, hazardous waste site control and operations, operator certification, report writing.

Effective: Fall 2011

Prerequisite: ENVE 411

ENVSC 400W

Case Studies in Environmental Analysis and Problem-Solving (3) A writing-intensive environmental science course comprising review and analysis of field, lab, policy, and management aspects; investigative methods; and projects.

Effective: Summer 2014

Prerequisite: BIOL 402W ; CHEM 202 ; GEOSC 300/400 level; ENGL 202C ; any PL SC or ECON

ENVSE 404W

Surface and Interfacial Phenomena in Environmental Systems (3) Principles underlying surface and interfacial phenomena with application to mineral processing and environmental systems.

Effective: Spring 2012

Prerequisite: or concurrent: CHEM 110 MATH 141 PHYS 212 EME 301

ENVST 400W

Senior Seminar in Environmental Studies (3) Writing-intensive study of a specified topic in environmental studies integrating approaches and research from a variety of disciplines.

Effective: Spring 2000

Prerequisite: ENVST 200

FD SC 406W

Physiology of Nutrition (3) Physiological mechanisms involved in thirst and appetite, digestion, absorption, utilization of nutrients, respiration, and body temperature regulation.

Effective: Fall 2016

Prerequisite: B M B 211 Prerequisite or concurrent: FD SC 200 ; FD SC 201

FD SC 409W

Laboratory in Food Microbiology (2) Methods of isolation, detection of spoilage, pathogenic microorganisms in foods; effects of processing and preservation on survival of food microorganisms.

Effective: Fall 2016 Ending: Fall 2016

Prerequisite: FD SC 200 FD SC 201 MICRB 202 Prerequisite or concurrent: FD SC 408

FIN 305M

Financial Management of the Business Enterprise (Honors) (3) Development of advanced practices of financial management and their application to decision making in a business firm.

Effective: Spring 2012

Prerequisite: B A 301 or FIN 301

FIN 305W

Financial Management of the Business Enterprise (3) Development of advanced practices of financial management and their application to decision making in a business firm.

Effective: Spring 2011

Prerequisite: B A 301 or FIN 301

FIN 306W

Investment Valuation (3) Approaches to investment strategy, investment decisions; valuation of corporate securities, including the impact of dividend policy and capital structure.

Effective: Spring 2001

Prerequisite: FIN 301

FOR 450W

Human Dimensions of Natural Resources (3) Addresses human needs and desires, from individuals to nations, for social, ecological, and economic benefits derived from natural resource decisions.

Effective: Spring 2014

Prerequisite: 6 credits of social and behavioral sciences

FOR 466W

Forest Management and Planning (3) Rationale, process, and tools for forest management decision-making and planning. Developing and communicating forest plans for forested properties.

Effective: Spring 2014

Prerequisite: FOR 255 FOR 421 and FOR 440

FOR 488Y (IL)

Global Forest Conservation (3) Ecological, economic, technological, and political aspects of forested ecosystems in a global context, emphasizing tropical and developing countries.

Effective: Spring 2013

Prerequisite: 3 credits in natural sciences and 3 credits in social and behavioral sciences

FR 402Y (IL)

Advanced Grammar and Writing (3) Advanced study of the structure of the French language. Intensive essay writing.

Effective: Spring 2006

Prerequisite: FR 201 FR 202

FR 426Y (IL)

French Literature of the Renaissance (3) Survey of key texts from sixteenth century France, with attention to historical and philosophical currents of French social thought.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 445Y (IL)

Self and Society in Eighteenth-Century France (3) The changing relationship of the individual to society in pre-Revolutionary France will be explored in texts by major writers.

Effective: Spring 2006

Prerequisite: FR 351 . Prerequisite or concurrent: FR 352

FR 452Y (IL)

Nineteenth-Century French Literature (3) Selected readings in romanticism, realism, and symbolism, including Balzac, Stendhal, Sand, Baudelaire, and others, with emphasis on cultural issues.

Effective: Fall 2006

Prerequisite: FR 351 or FR 352

FR 453Y (IL)

La Belle Epoque: Politics, Society, and Culture in France, 1880-1914 (3) Interdisciplinary perspectives on the politics, society, and culture of France, 1880-1914.

Effective: Summer 2013

Prerequisite: FR 351 or FR 352

FRNSC 415W

Laboratory in Crime Scene Investigation (2) Laboratory course covering crime scene investigation with emphasis on scientific philosophy, concepts, procedures, problem solving, and hands-on activities.

Effective: Summer 2012

Prerequisite: FRNSC 410

FRNSC 421W

Forensic Molecular Biology (4) Concepts and application of serology of molecular biology techniques to analyze biological evidence collected at crime scenes.

Effective: Fall 2012

Prerequisite: B M B 442 B M B 400 B M B 401 and FRNSC 413 prerequisite or concurrent FRNSC 400

FRNSC 427W (CHEM 427W)

Forensic Chemistry (4) Analytical and instrumental methods used in the forensic sciences with special emphasis on the analysis and characterization of trace evidence.

Effective: Fall 2012

Prerequisite: CHEM 213 CHEM 227 and FRNSC 411 or CHEM 431W

FRNSC 485W

Coalescence of Forensic Science Concepts. (4) Advanced concepts in criminalistics as they apply to criminal and civil investigations.

Effective: Spring 2013

Prerequisite: FRNSC 411 FRNSC 413 FRNSC 415W

GD 202W

The History of Graphic Design (3) A survey of graphic design, especially emphasizing influential movements, innovative designers and technological advances relevant to contemporary visual communication.

Effective: Summer 2011

Prerequisite: GD 001S GD 100 GD 101

GD 403W

Graphic Design Seminar (3) A seminar on subjects which relate to the field of graphic design.

Effective: Fall 2007

Prerequisite: GD 302

GEOG 310W

Introduction to Global Climatic Systems (3) Introduction to global atmospheric circulation, including tropical, midlatitude and polar subsystems; ocean, land, cryospheric and urban climatic systems and interactions.

Effective: Spring 2007

Prerequisite: GEOG 010 or METEO 003

GEOG 411W

Forest Geography (3) This course studies processes that control spatial and temporal change in forests.

Effective: Fall 2015

Prerequisite: GEOG 010 GEOG 314 ; or BIOL 220W

GEOG 412W

Climatic Change and Variability (3) Theories and observations of past, present, and future climatic change and variability; introduction to techniques used in climatic change research.

Effective: Spring 2007

Prerequisite: GEOG 110 or METEO 003

GEOG 420Y (US;IL)

Comparative Urbanism (3) This course investigates selected urban issues through the lens of comparative urbanism.

Effective: Fall 2011

Prerequisite: GEOG 120 GEOG 160

GEOG 423Y (US)

Historical Geography of North America (3) Exploration, settlement, and changing patterns of human occupancy from the seventeenth century to the 1930s.

Effective: Fall 2011

Prerequisite: GEOG 122 3 additional credits in geography or 6 credits American history

GEOG 426Y (WMNST 426Y) (US;IL)

Gender Geographies (3) Description and explanation of the links between gender relations and spatial structures.

Effective: Fall 2013

Prerequisite: GEOG 020 or GEOG 126 or GEOG 120 or WMNST 100

GEOG 428Y (US;IL)

Political Geography (3) Geographical foundations of political phenomena; significant geographic factors in growth and development of states, boundary problems, population distribution, colonies, and internal and international regional problems.

Effective: Spring 2012

Prerequisite: 3 credits human geography (GEOG 020 or 120 or 122 or 123 or 124 or 126 or 128)

GEOG 438W

Human Dimensions of Global Warming (3) Human dimensions of climate change: human causes, human consequences, and policy implications of global warming.

Effective: Spring 2012

Prerequisite: EARTH 002 GEOG 010 or METEO 003 ; GEOG 030

GEOG 461W

Dynamic Cartographic Representation (3) Theory and practice of mapping and geo-representation in a dynamic media context. Applications in science, policy, travel, and education.

Effective: Spring 2010

Prerequisite: GEOG 361 or GEOG 362 or GEOG 363

GEOG 402Y (IL)

Natural Disasters (3) Case studies of the causes and consequences of natural disasters; analysis of disaster impact in different economic, cultural, and social conditions.

Effective: Summer 2005

Prerequisite: fourth-semester standing

GEOG 409W

Geomicrobiology (3) Investigation of modern and ancient microbial interactions with soils, sediments, the atmosphere, minerals, rocks, nutrients, and pollutants.

Effective: Summer 2008

Prerequisite: CHEM 112 ; GEOG 001 GEOG 020 GEOG 040 EARTH 002 BIOL 110 or MICRB 201

GEOG 413W

Techniques in Environmental Geochemistry (3) This course teaches techniques needed for the collection, chemical analysis, and data analysis of environmental geochemical measurements. This course has one or more required field trips for which a fee is charged to the student.

Effective: Spring 2002

Prerequisite: one of the following: C E 475 CHEM 402 GEOG 202 GEOG 412 SOILS 419

GEOG 470W

Introduction to Field Geology (3) Field interpretation of geologic features; principles and techniques of geologic mapping; interpretation of geologic maps and diagrams. This course has one or more required field trips for which a fee is charged to the student.

Effective: Spring 2002

Prerequisite: GEOG 001 ; fifth-semester standing

GEOG 494M

Thesis Research (1-6) Supervised student activities on research projects identified on an individual or small group basis.

Effective: Fall 2015

Prerequisite: seventh-semester standing

GEOG 494W

Senior Thesis (1-4) Supervised student activities on research projects identified on an individual or small group basis.

Effective: Spring 2001

Prerequisite: seventh-semester standing

GER 208Y (IL)

Business German (4) Intermediate Business German.

Effective: Fall 2006

Prerequisite: GER 003 or GER 008

GER 302W

Intermediate Composition and Grammar (3) Continuation of oral and written practice in German with extensive work in composition.

Effective: Spring 2012

Prerequisite: GER 201 or GER 208

GER 308Y (IL)

German Business Communication (3) Development of German commerce and industry; extensive practice in the major forms of business communications such as business correspondence.

Effective: Spring 2012

Prerequisite: GER 301 or GER 302W

GER 401Y (IL)

Advanced Composition (3) Intensive practice in writing different text types in German.

Effective: Spring 2012

Prerequisite: GER 301 and GER 302W

GLIS 400Y (IL)

Seminar in Global and International Studies (3) An upper-division capstone seminar focusing critical themes in Global and International Studies with a focus on the writing of a senior thesis for the Global Studies Major.

Effective: Spring 2016

Prerequisite: GLIS 101 GLIS 102

H P A 390W

Professional Development in Health Policy and Administration (3) Development of personal understanding and professional skills to prepare students for future employment or study in health policy and administration.

Effective: Fall 2016

Prerequisite: H P A 101

HD FS 287W (GS;US)

Intercultural Community-Building (3) An experiential introduction to negotiating differences in small groups, families, institutions, and communities.

Effective: Summer 2005

HD FS 287Y (GS;US)

Intercultural Community-Building (3) An experiential introduction to negotiating differences in small groups, families, institutions, and communities.

Effective: Summer 2005

HD FS 310M

Seminar in Honors--Research Methods (4) Overview of research and methods issues tailored around development of honors thesis proposals.

Effective: Spring 2014

Prerequisite: permission of Human Development and Family Studies honors adviser

HD FS 312W

Empirical Inquiry in Human Development (3) Introduction to the skills involved in critical thinking in general and the methods of empirical inquiry in particular. Open to HD FS majors only.

Effective: Spring 2001

Prerequisite: a grade of C or better required in EDPSY 101 or STAT 200

HD FS 315Y (US)

Family Development (3) Family functions over the life course; family from a multidisciplinary perspective, emphasizing adaptation and change.

Effective: Summer 2005

Prerequisite: HD FS 129 ; 3 credits of social behavioral or human biological sciences

HIST 020Y (GH;US)

American Civilization to 1877 (3) An historical survey of the American experience from its colonial beginnings through the Civil War and Reconstruction.

Effective: Spring 2006

HIST 021Y (GH;US)

American Civilization Since 1877 (3) An historical survey of the American experience from the emergence of urban-industrial society in the late nineteenth century to the present.

Effective: Spring 2006

HIST 153Y (GH;US)

The Indian in North America (3) A survey of the American Indian from prehistory to the present.

Effective: Summer 2005

HIST 203Y (GH;US;IL)

History of Monsters, Aliens & The Supernatural (3) This course explores the history of the preoccupation with monsters, aliens, and the supernatural.

Effective: Summer 2015

HIST 213Y (AF AM 213Y, WMNST 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.

Effective: Spring 2015

HIST 261Y (J ST 261Y) (GH;US;IL)

Ghetto: From Venice to Detroit (3) This course explores why certain groups have been segregated in cities around the world in the last 500 years.

Effective: Spring 2015

HIST 266Y (WMNST 266Y) (GH;US)

Sex and Violence in Nineteenth-Century America (3) Historical Overview of Sex and Violence in the Nineteenth-Century United States.

Effective: Spring 2015

HIST 301W

Scope and Methods of History (3) A course designed to introduce students to the analysis, methods, and practices of historical writing and research.

Effective: Spring 2008

Prerequisite: 3 credits in history

HIST 302W

Undergraduate Seminar (3) Thematic or topical investigation; emphasis on historical criticism and analysis.

Effective: Spring 2014

Prerequisite: 4th semester standing

HIST 320W

Contemporary World History and Issues (3) Aspects of global history in 20th and 21st centuries and study of selected trends and controversies.

Effective: Spring 2008

HIST 405Y (IL)

The Roman Empire (3) The political and social history of the Roman empire; economic institutions and religious groups which influenced Roman administration.

Effective: Spring 2006

Prerequisite: HIST 001 HIST 101 or 3 credits in classical studies

HIST 406W

Research in Medieval Sources (3) Guided research in the literature of medieval Europe.

Effective: Spring 2008

Prerequisite: HIST 001

HIST 409Y (J ST 409Y, RL ST 407Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.

Effective: Fall 2015

HIST 418W (IL)

The French Revolution and the Napoleonic Era (3) Developments of revolutionary France and the First French Empire and their impact on Europe from 1789 to the Vienna settlement.

Effective: Spring 2008

Prerequisite: HIST 002

HIST 444W (US)

The United States in Civil War and Reconstruction--1850-1877 (3) Causes of the Civil War; conduct of the war, North and South; impact of the war; problems of reconstruction.

Effective: Spring 2008

Prerequisite: HIST 130 or HIST 020

HIST 456Y (US)

The Social History of American Vernacular Building, 1607-1980 (3) Social, historical, and cultural context of American building including settlements, housing, workplaces, stores, recreational facilities; changes over time.

Effective: Spring 2006

Prerequisite: 3 credits in American history

HIST 458Y (LER 458Y) (US)

History of Work in America (3) A study of selected problems in the history of work in the United States, especially since 1877.

Effective: Spring 2008

Prerequisite: HIST 021 HIST 156 or LER 100

HIST 459Y (US)

Social and Cultural History of the United States Since 1783 (3) Role of immigration, social reform movements, religion, education, science, literature, and the arts in American history.

Effective: Spring 2006

HIST 471Y (RL ST 471Y) (IL)

Classical Islamic Civilization, 600-1258 (3) Pre-Islamic Arabia; Muhammad; Arab conquests; Islamic beliefs and institutions; literary, artistic, and scientific achievements; relations with Europe; breakdown of unity.

Effective: Fall 2006

HIST 475Y (ASIA 475Y) (IL)

The Making and Emergence of Modern India (3) India's transition to social, economic, and political modernity through the experience of British colonial rule and the nationalist struggle.

Effective: Spring 2015

Prerequisite: HIST 010 HIST 011 HIST 172 HIST 175 HIST 176 HIST 181 or HIST 191

HIST 484Y (ASIA 484Y) (IL)

History of Chinese Thought (3) A study of the dynamic historical development of Chinese thought with its diverse expressions from antiquity to the present.

Effective: Fall 2014

Prerequisite: HIST 174 or HIST 175

HIST 485Y (ASIA 485Y) (IL)

China's Last Empire: The Qing Dynasty, 1644-1911 (3) China from 1644 founding of Qing dynasty to 1911 fall; Chinese society and institutions, imperialism and China's internal diversity.

Effective: Fall 2014

Prerequisite: HIST 175 or HIST 300H (Honors in East Asian history)

HM 290W

Hospitality Managerial Communication (3) Provides the foundational skills for professional written and oral communication for managers in the hospitality industry.

Effective: Spring 2016

Prerequisite: a "C" or better in HM 201 and ENGL 015 ENGL 030 or ESL 015

HM 395W

Practicum Analysis (3) Written analysis comparing and contrasting conceptual issues in the hospitality industry.

Effective: Fall 2014

Prerequisite: HM 201 1000 hours of adviser-approved professional hospitality experience

HM 490W

Strategic Hospitality Management (3) This capstone writing-intensive class integrates content from throughout the previous curriculum, focusing on strategic application to current industry issues.

Effective: Spring 2016

Prerequisite: a grade of "C" or better in HM 336 HM 365 and HM 442

HONOR 494M

Interdisciplinary Writing and Thesis Formulation (2) Seminar to help students with interdisciplinary analysis, writing, and formulation of honors projects and proposals.

Effective: Fall 2010

Prerequisite: admission to an honors program belonging to the Penn State Honors Consortium

HORT 402W

Plant Nutrition (3) Mineral nutrition of higher plants, including nutrient acquisition, transport, metabolism, and practical implications.

Effective: Summer 2013

Prerequisite: HORT 315 or BIOL 441 SOILS 101

HORT 410W

Issues in Landscape Contracting (3) This will be a survey of business management, regulatory, and environmental issues facing the landscape contracting profession. Laboratory.

Effective: Summer 2013

Prerequisite: HORT 408

HORT 412W

Post-Harvest Physiology (3) Harvesting, handling, storage, and transportation of horticultural crops; primary emphasis on physiological response to pre- and post-harvest environmental factors.

Effective: Summer 2013

Prerequisite: 6 credits in horticulture or other plant sciences

HRIM 295W

Analysis of Field Experience I (3) Capstone class integrating content from throughout the previous curriculum, including directed written analysis of the 500-hour hospitality working experience.

Effective: Fall 2014

Prerequisite: HM 201 HM 204 HM 250 HM 335 and HM 380

HUM 300W

Interpretations in the Humanities (3) A study of selected themes, topics, or periods that introduces students to interdisciplinary approaches to knowledge, interpretation, and creative expression.

Effective: Spring 2016

Prerequisite: ENGL 015 ENGL 202 and at least 30 credits

I E 480W

Capstone Design Project (3) Industry-based senior capstone design project emphasizing manufacturing systems, service systems, and information systems in an interdisciplinary setting.

Effective: Fall 2016

Prerequisite: I E 302 I E 305 I E 323 I E 327 I E 405

INART 100W (GA)

Seminar in Integrative Arts (3) A study of various arts with emphasis on comparison, contrast, and other aspects of interrelation. Topics will change each semester.

Effective: Summer 2012

IST 260W

Introduction to Systems Analysis and Design (3) Introduction to systems analysis and design, stressing the process of requirements acquisition, specification, design, and implementation.

Effective: Spring 2010

Prerequisite: IST 110 IST 210 IST 220 and ENGL 015

IST 440W

Information Sciences and Technology Integration and Problem Solving (3) Problem-based approach to technology integration by focusing on real-life problems faced by an organization.

Effective: Fall 2002

Prerequisite: ENGL 202C or ENGL 202D seventh-semester standing (this course is intended for seniors) and the five common course requirements plus at least three of the required courses in an option

IT 330W

Greatest Books of Italian Literature (3) A survey of the greatest books of Italian literature (prose, poetry, drama). Time period varies each semester. In Italian.

Effective: Summer 2006

Prerequisite: IT 003 IT 020 or permission of program

J ST 261Y (HIST 261Y) (GH;US;IL)

Ghetto: From Venice to Detroit (3) This course explores why certain groups have been segregated in cities around the world in the last 500 years.

Effective: Spring 2015

J ST 409Y (HIST 409Y, RL ST 407Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.

Effective: Summer 2015

J ST 425W (CAMS 425W, RL ST 425W)

Books of the Bible: Readings and Interpretation (3 per semester/maximum of 12) Study of a biblical book/topic in terms of literary, historical, and cultural contexts, history of interpretation, and critical scholarship.

Effective: Summer 2015

Prerequisite: 3 credits in CAMS or J ST or RL ST recommended CAMS/J ST/RL ST 110 or 120; or ENGL 104

JAPNS 120W (GH;IL)

Japanese Literature in its Cultural Context (3) Japanese Literature in its Cultural Context: Japanese literature and Culture from Classical through contemporary times; writing intensive.

Effective: Summer 2013

JAPNS 403Y (IL)

Level Four Japanese A (4) Continuation of JAPNS 402. Aims to improve students' proficiency in all four language skills, with a special emphasis on writing.

Effective: Fall 2012

Prerequisite: JAPNS 402

KINES 425W

Physical Activity in Diverse Populations (3) An examination of the social, cultural, political, and environmental influences on health and physical activity promotion among diverse populations.

Effective: Summer 2013

Prerequisite: KINES 321

KINES 438W

Administration and Issues in Athletic Training (3) Theoretical and practical aspects for management of an Athletic Training professional practice and identifying contemporary issues related to the profession.

Effective: Fall 2006

Prerequisite: KINES 436

KINES 439W

Ethics in Sport and Sport Management (3) Analysis of moral dilemmas in sport and sport management utilizing the tools of ethics.

Effective: Spring 2001

Prerequisite: KINES 345 or 3 credits in humanities

KINES 447W

Representing Sport in Popular Film (3) Critical, contextual, and theoretical analyses of sport films focusing on popular narratives of social inequalities.

Effective: Spring 2013

Prerequisite: KINES 141 KINES 345

KINES 461W

Preparation for Research Project (2) Planning and preparation for research project.

Effective: Fall 2006

Prerequisite: KINES 180 KINES 260 STAT 200 KINES 321 KINES 345 KINES 350 KINES 360 KINES 384

KINES 462W

Research Project (2) Completion of research topic.

Effective: Fall 2006

Prerequisite: KINES 461W

KINES 468W

Health Instruction in the School-Content and Method (3) Skills and methods to design comprehensive preschool through twelfth health instruction using interactive learning activities that lead to health literacy.

Effective: Fall 2016

Prerequisite: C or higher grade required EDPSY 010 KINES 100 ; KINES 141 KINES 101 ; KINES 180 KINES 295 PSYCH 100

KINES 469W

Curriculum Development in Health and Physical Education (3) The content and process of K-12 school health and physical education curriculum development for public school students.

Effective: Fall 2006

Prerequisite: KINES 362 KINES 364 KINES 366

KINES 481W

Scientific Basis of Exercise for Older Adults (3) Study of age-associated physical changes and the effects of exercise on the aging process.

Effective: Spring 2001

Prerequisite: KINES 350

KINES 492W

Programming for Business and Agencies (3) Fundamentals of program development applied to corporate and private physical fitness businesses.

Effective: Fall 2006

Prerequisite: KINES 395B

L A 201W

Experiential Learning Portfolio (3) Students will learn how to assemble a portfolio that reflects their progress, knowledge, and insight into college-level study.

Effective: Summer 2014

LARCH 361W

Historic Issues in Landscape Architecture (3) A review of design history (precedent studies), an introduction to historic method, history as an informant to design, reading the historic landscape, and issues of preservation and restoration. Landscape Architecture majors only.

Effective: Spring 2012

Prerequisite: LARCH 311

LATIN 450W

History of Latin (3) History of the Latin language and its speakers, from their origins to the 2nd century C.E.

Effective: Summer 1994

Prerequisite: LING 102 ; LATIN 401 LATIN 402 or LATIN 403

LER 445Y (AF AM 445Y, PL SC 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

LER 458Y (HIST 458Y) (US)

History of Work in America (3) A study of selected problems in the history of work in the United States, especially since 1877.

Effective: Spring 2008

Prerequisite: HIST 021 HIST 156 or LER 100

LL ED 412W

Teaching Language Arts in Secondary Schools II (3) Exploration of language, literacy, and culture and development of curricular designs for teaching language arts in secondary schools.

Effective: Spring 2014

Prerequisite: LL ED 411 or LL ED 400

M E 345W

Instrumentation, Measurements, and Statistics (4) Measurement concepts, probability and statistics, error analysis; electro- mechanical transducers, applied electrical and mechanical measurements, electrical and electronics instruments, data acquisition and instrumentation systems.

Effective: Spring 2008

Prerequisite: Prerequisite or concurrent: E E 212 or E E 211 or equivalent

M E 440W

Mechanical Systems Design Project (3) Design and analysis of mechanical components and systems. Application of fundamental design and analysis methods to open ended engineering problems.

Effective: Spring 2015

Prerequisite: M E 340 ; M E 360 ; M E 370 ; prerequisite or concurrent: I E 312 ; ENGL 202C

M E 441W

Thermal Systems Design Project (3) Design of thermal systems through component design and/or selection, system simulation and optimization. Assessment of system economics and energy efficiency.

Effective: Spring 2015

Prerequisite: M E 340 ; M E 410 Prerequisite or concurrent: ENGL 202C

M E 442W

Advanced Vehicle Design I (2) Part one of a two course sequence; applications of design and analysis methods to

open-ended advanced transportation vehicles. Two semester course; satisfies Senior Design or ME Technical Elective requirements (when combined with M E 443W).

Effective: Spring 2015

Prerequisite: M E 340C ; M E 360 ; M E 370 Prerequisite or concurrent: M E 410 ; I E 312 ; ENGL 202C

M E 443W

Advanced Vehicle Design II (1) Part two of a two course sequence; applications of design and analysis methods to open-ended advanced transportation vehicles. Two semester course; satisfies Senior Design or ME Technical Elective requirements (when combined with M E 442W).

Effective: Summer 2010

Prerequisite: M E 442W

MAE T 204W

Structure Characterization Laboratory (3) A hands-on experience course with emphasis on equipment and lab techniques used for microstructural evaluation of metals.

Effective: Summer 2007

Prerequisite: MAE T 201 CHEM 111 PHYS 150

MATH 311M

Honors Concepts of Discrete Mathematics (3) Basic methods of mathematical thinking and fundamental mathematical structures, primarily in the context of numbers, groups, and symmetries.

Effective: Spring 2006

Prerequisite: MATH 141

MATH 311W

Concepts of Discrete Mathematics (3-4) Introduction to mathematical proofs; elementary number theory and group theory. Students who have passed CMPSC 360 may not schedule this course for credit.

Effective: Spring 2007

Prerequisite: MATH 141

MATH 475W (US;IL)

History of Mathematics (3) A global survey of the history of mathematics as viewed as a human response to cultural, political, economic, and societal pressures.

Effective: Spring 2012

Prerequisite: MATH 315 or MATH 311W

MATSE 484W (IL)

International Internship in Materials: Research Definition and Methodology (3) A course focused on international research, specific design and methodology, facilitated through the International Internship in Materials and Program.

Effective: Summer 2006

Prerequisite: Sixth-semester standing in Materials Science and Engineering; MATSE 201 MATSE 460 MATSE 492W satisfactory completion of cultural class from Office of Education Abroad

MATSE 485W (IL)

International Internship in Materials: Experimentation and Documentation (3) A course focused on international research, specifically experimentation and documentation, facilitated through the International Internship in Materials Program.

Effective: Summer 2006

Prerequisite: Seventh-semester standing in Materials Science and Engineering; MATSE 484W ; satisfactory completion of cultural class from Office of Education Abroad

MATSE 492W

Materials Engineering Methodology and Design (3) Designed to familiarize students with the literature and technology developments in the use of, and design with, materials in industrial applications.

Effective: Fall 2014

Prerequisite: MATSE 201 MATSE 202 MATSE 436 sixth semester standing in Materials Science and Engineering

MATSE 493W

Materials Science and Engineering Multidisciplinary Capstone Design Project (3) This course focuses on multidisciplinary industry-sponsored and community service-based design projects offered in conjunction with the College of Engineering's Learning Factory.

Effective: Summer 2012

Prerequisite: MATSE 492W

MATSE 494M

Research and Design Senior Project (1-3) Continuation of a research problem in materials culminating in a bound thesis describing the work.

Effective: Fall 2007

MATSE 494W

Research and Design Senior Project (1-3) Continuation of a research problem in materials culminating in a bound thesis describing the work.

Effective: Spring 2006

MET 210W

Machine Design (3) Design machine elements including bearings, springs, levers, shafts, gears, belts, and small mechanical devices; writing skills and computer applications.

Effective: Fall 2014

Prerequisite: MET 206 or E MCH 212 or PHYS 150 or PHYS 250 or PHYS 211 ; MCH T 213 or E MCH 213 or ET 322 or EMET 322

MET 331W

Heat Transfer (4) Introduction for technologists to the basic concepts and applications of heat transfer. Includes a thermodynamics and heat transfer laboratory.

Effective: Fall 2007

Prerequisite: M E 300 or MET 330 . Prerequisite or concurrent: MET 341

METEO 418W

Topics in Mesoscale Meteorology (3) Topics in mesoscale meteorology will be investigated in an independent study environment through computer-based modules, papers, and semester project.

Effective: Fall 1995

Prerequisite: METEO 414

METEO 440W

Principles of Atmospheric Measurements (3) Theory and practices used in measurement and analysis of meteorological variables.

Effective: Fall 2010

Prerequisite: METEO 300 METEO 431 STAT 301 or STAT 401 or E B F 472

METEO 471W

Observing Meteorological Phenomena (3) Teaching the observational and interpretative skills needed to read the sky.

Effective: Spring 1999

Prerequisite: METEO 421 . Prerequisite or concurrent: METEO 436

METEO 480M

Undergraduate Research (3) Undergraduate Research

Effective: Summer 2015

Prerequisite: junior or senior standing as a Meteorology Major

METEO 480W

Undergraduate Research (3) A research thesis will be prepared. A written and oral presentation required.

Effective: Summer 1991

Prerequisite: junior or senior standing as a Meteorology Major

MGMT 100W

Survey of Management (3) Introduction to organizational factors relevant to management processes, including leadership, motivation, job design, technology, organizational design and environments, systems, change. May not be used to satisfy Penn State Business baccalaureate degree requirements. Not available to students who have taken B A 304 or MGMT 301.

Effective: Summer 1993

MGMT 301W

Basic Management Concepts (3) Examination of fundamental principles and processes applicable to the study of management. Not available to students who have taken B A 304.

Effective: Summer 2013

Prerequisite: ENGL 015 or ENGL 030 ; ECON 102 or ECON 104 ; MATH 021 or higher or satisfactory score on the mathematics placement examination

MGMT 451W

Business, Ethics, and Society (3) Advanced examination of social, ethical, legal, economic, equity, environmental, public policy, and political influences on managerial decisions and strategies.

Effective: Spring 2015

Prerequisite: B A 241 and B A 242 or B A 243 or B A 342

MGMT 471W

Strategic Management and Business Policy (3) Study of strategic management and business policy formulation and implementation processes.

Effective: Spring 2008

Prerequisite: MGMT 301 MKTG 301 FIN 301 SCM 301

MGMT 475W

Strategic Product Development (3) Study of an organization, industry, and evaluation of the introduction to a new product. Preparation of proposal for industry product.

Effective: Summer 2008

Prerequisite: 7th semester standing; MGMT 300 ; FIN 301 ; SCM 310 ; MKTG 301 ; M E 300 or MET 330 ; MCH T 213 or E MCH 213 ; EET 101 or E E 211

MICRB 151W

Clinical Microbiology and Body Fluid Analysis for Medical Laboratory Technicians (5) Properties of normal and abnormal microbial flora and procedures for their identification. Analysis of urine and other body fluids.

Effective: Fall 2014

Prerequisite: BIOL 141 CHEM 202 MICRB 150 MICRB 201 MICRB 202

MICRB 421W

Laboratory of General and Applied Microbiology (3) Laboratory exercises demonstrating fundamental techniques and principles of experimentation of general and applied microbiology.

Effective: Spring 2001

Prerequisite: MICRB 201 MICRB 202

MIS 479W

Enterprise Information Systems (3) Management and implementation of enterprise information systems for business integration and supply chain management.

Effective: Fall 2016

Prerequisite: MIS 432

MKTG 221W

Contemporary American Marketing (3) Social and economic aspects; movement of goods and services from producers to consumers; analysis of marketing functions, systems, and institutions. May not be used to satisfy Penn State Business baccalaureate degree requirements. Not available to students who have taken B A 303 or MKTG 301.

Effective: Spring 1993

Prerequisite: 3 credits in economics

MKTG 301W

Principles of Marketing (3) Focuses on customer behavior, product, channels of distribution, promotion, and pricing with emphasis on a culturally diverse environment. Not available to students who have taken BA 303.

Effective: Summer 2013

Prerequisite: ENGL 015 or ENGL 030 ; ECON 102 or ECON 104 ; MATH 021 or higher or satisfactory score on the mathematics placement examination

MKTG 450W

Marketing Strategy (3) Market-oriented problems of the firm; identification and selection of market opportunities; formulation of competitive strategies; marketing policies and programs.

Effective: Spring 2008

Prerequisite: MKTG 330 MKTG 342

MNG 451W

Mining Engineering Project (1-5) Independent and integrative design and report of specific mine evaluation, layout, equipment selection, environmental control, permitting, and financial analysis.

Effective: Fall 2016

Prerequisite: MNG 331 MNG 404 MNG 412 MNG 422

MNG T 205W

Mining Systems Technology (3) Comparison of mining methods with focus on preventative maintenance, coal transport, and estimating production and manpower needs.

Effective: Summer 2006

Prerequisite: MNG T 030

MTHED 412W

Teaching Secondary Mathematics II (3) Assessing learning and instruction; methods of evaluation and grading; long-term planning; accommodating needs of diverse learners; connecting theory and practice.

Effective: Summer 2010

Prerequisite: a grade of C or better in MTHED 411

MUSIC 441W

Emphasis in Elementary General and Choral Music (3) Selection and application of materials, methods, teaching and assessment strategies for elementary general and choral music settings.

Effective: Spring 2011

Prerequisite: MUSIC 345 MUSIC 395B

MUSIC 442W

Emphasis in Secondary General Music (3) Emphasis in teaching in secondary general music settings.

Effective: Fall 2013

Prerequisite: Limited to Music Education Majors. MUSIC 345 MUSIC 395B

MUSIC 444W

Emphasis in Elementary and Intermediate Band (3) Examination and application of teaching strategies and materials for students planning to teach band in the elementary and middle schools.

Effective: Spring 2011

Prerequisite: MUSIC 345 MUSIC 395A MUSIC 366 piano proficiency passes

MUSIC 445W

Emphasis in High School Band (3) Examination and application of teaching strategies and materials for students planning to teach high school bands.

Effective: Spring 2011

Prerequisite: MUSIC 345 MUSIC 395B

MUSIC 446W

Emphasis in Strings and Orchestra (3) Development of teaching techniques for instructing elementary and secondary string/orchestra student musicians for music education majors.

Effective: Spring 2011

Prerequisite: MUSIC 345 MUSIC 395B

MUSIC 461W

Studies in Music History: Antiquity to 1600 (3 per semester/maximum of 6) In-depth study of selected aspects of music and culture from antiquity to 1600, with emphasis on writing and research.

Effective: Fall 2010

Prerequisite: MUSIC 261 MUSIC 331

MUSIC 462W

Studies in Music History: 1550-1750 (3 per semester/maximum of 6) In-depth study of selected aspects of music and

culture from 1550-1750, with emphasis on writing and research.

Effective: Fall 2010

Prerequisite: MUSIC 261 MUSIC 331

MUSIC 463W

Studies in Music History: 1700-1900 (3 per semester/maximum of 6) In-depth study of selected aspects of music and culture from 1700-1900, with emphasis on writing and research.

Effective: Fall 2010

Prerequisite: MUSIC 262 MUSIC 331

MUSIC 464W

Studies in Music History: 1850-Present (3 per semester/maximum of 6) In-depth study of selected aspects of music and culture from 1850 to the present, with emphasis on writing and research.

Effective: Fall 2010

Prerequisite: MUSIC 262 MUSIC 332

MUSIC 476W

B.A. Senior Project (3) A semester project appropriate to student's option in B.A. program (e.g., research paper, performance with program notes, or related paper).

Effective: Spring 1992

Prerequisite: seventh-semester standing

NMT 210W

Introduction to Nanofabrication Manufacturing Technology (3) This course provides an overview of basic Nanofabrication Manufacturing Technology for Engineering and Technology students. The course will give the student an overview of atomic physics and the use of atoms to build devices and machines.

Effective: Fall 2003

Prerequisite: E E T 101

NUC E 310W

Issues in Nuclear Engineering (2) Societal and technical issues facing nuclear engineers, including safety, operations, waste, regulation, public acceptance, economics, ethics, and radiation.

Effective: Fall 2001

Prerequisite: fifth-semester standing

NUC E 431W

Nuclear Reactor Core Design Synthesis (4) Technical and economic optimization of nuclear systems.

Effective: Spring 2016

Prerequisite: NUC E 403 NUC E 430 ; prerequisite or concurrent: ENGL 202C

NURS 200M

Understanding and Applying Nursing Research - Honors Section (3) Introduction to methods and philosophy of empirical inquiry as applied to research in nursing and application to practice.

Effective: Summer 2015

Prerequisite: STAT 200 or STAT 250 NURS 225 ; or STAT 250 and NURS 390 for NURN majors

NURS 200W

Principles of Nursing Research and Evidence-Based Practice (3) Introduction to principles and methods of nursing research and application of research evidence to practice.

Effective: Fall 2016

Prerequisite: STAT 200 or STAT 250 NURS 225 ; or STAT 250 and NURS 390 for NURN major

NURS 214W

Nursing Care of Clients with Psychiatric/Mental Health Disorders (3) Emphasis on care of adults with emotional or dysfunctional mental health patterns.

Effective: Spring 2013

Prerequisite: NURS 211 NURS 212 PSYCH 100

NUTR 490W

Nutrition Seminar (3) Use of selected materials from the scientific literature to prepare a term paper and an oral report.

Effective: Spring 1995

Prerequisite: or concurrent: NUTR 452

O T 105W

Group Process Across The Lifespan (3) Group dynamics and interactions analyzed across the lifespan and practice settings. Interventions designed and facilitated by students.

Effective: Fall 2013

Prerequisite: O T 103

O T 412W

Introduction to Research (3) Introduction to quantitative and qualitative research process relative to occupational therapy.

Effective: Summer 2011

Prerequisite: STAT 200 or STAT 250

P N G 440W

Formation Evaluation (3) Study of those methods used to evaluate the engineering properties of oil and gas bearing reservoir formations.

Effective: Spring 1999

Prerequisite: P N G 405 P N G 406

P T 270W

Pathophysiology (3-4) Introduction medical and post-operative conditions and/or disease states most frequently treated by physical therapy interventions.

Effective: Fall 2016

Prerequisite: a grade of C or better in BIOL 129 BIOL 141 BIOL 142 P T 100 or P T 100S

P T 280W

Rehabilitation (4-5) This course provides the theoretical basis and clinical practice skills used in the assessment and intervention for patients with neuromuscular, functional, and cognitive impairments.

Effective: Fall 2016

Prerequisite: A grade of "C" or better in BIOL 141 BIOL 142 P T 150 P T 160 P T 270 ; or P T 270A ; or P T 270W P T 384 P T 290 P T 395E

P T 282W

Rehabilitation-2W (3) Examination of techniques and laboratory experiences in rehabilitation techniques for the physically-challenged.

Effective: Spring 2015

Prerequisite: BIOL 141 BIOL 142 P T 100 P T 290 P T 270 or P T 270A or P T 270W P T 395E and P T 281

PHIL 103W (GH)

Introduction to Ethics (3) Ethical theory about virtue, duty, autonomy, and life quality applied to moral problems, including character, violence, oppression, abortion, and suicide.

Effective: Fall 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 108W (GH)

Introduction to Social and Political Philosophy (3) Critical introduction to political authority, rights, justice, community, inequality, power, pluralism, and other contemporary, social, and political issues.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 125W (GH)

Introduction to Theories of Knowledge (3) Historical and contemporary views on the foundations and conditions of knowledge, belief, justification, and truth, conception, perception, and interpretation.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 126W (GH)

Introduction to Metaphysics (3) Explores the nature of being and reality, the problem of free will and the mind/body problem, identity, and causality.

Effective: Summer 1998

Prerequisite: ENGL 015 or ENGL 030

PHIL 408W

Social and Political Philosophy (3) Historical and philosophical foundations of political organization, authority, and justice, and contemporary issues of rights, community, and culture.

Effective: Fall 1998

Prerequisite: 9 credits in philosophy including PHIL 108 or 6 credits at the 200 level

PHIL 418W

Ethics (3) Examines ethical theories, justice, rights, community, and human values revolving around such issues as preservation, conservation, pollution, sustainability, and population.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including PHIL 103 or 6 credits of philosophy at the 200 level

PHIL 425W

Epistemology (3) The nature of cognition and perception, the conditions of experience, and the justification and truth of belief.

Effective: Summer 1998

Prerequisite: 9 credits of philosophy including PHIL 125 or 6 credits of philosophy at the 200 level; in addition to ENGL 015 or ENGL 030

PHIL 426W

Metaphysics (3) Examines the nature of reality, the existence of freedom, and the nature of matter, mind, and values.

Effective: Summer 1998

Prerequisite: 9 credits in philosophy including PHIL 126 or 6 credits of philosophy at the 200 level

PHYS 421W

Research Methods in Physics (3) Methodology focusing on the theory of measurement and experiment design.

Effective: Spring 2007

Prerequisite: PHYS 237

PHYS 457W

Experimental Physics (3) Selected experiments in various fields in physics.

Effective: Spring 2007

Prerequisite: PHYS 212 PHYS 213 PHYS 214 and PHYS 237

PL ET 206W

Plastic Materials and Properties (3) Coverage of the most common commercial plastics including their additives, fillers,

and fibers; includes common physical tests used to determine material characteristics; writing intensive.

Effective: Spring 2011

Prerequisite: PL ET 205

PL SC 017W (GS)

Introduction to Political Theory (3) Introduction to basic issues in political theory through analysis of selected major political thinkers.

Effective: Spring 2001

PL SC 411W

Principles of International Cooperation (3) An exploration of the forces that make conflict, or cooperation, more likely in international relations.

Effective: Summer 2006

Prerequisite: PL SC 014

PL SC 418W

International Relations Theory (3) A survey of traditional and contemporary conceptual frameworks and theoretical approaches for the analysis of international relations.

Effective: Spring 1999

Prerequisite: PL SC 014

PL SC 430W

Selected Works in the History of Political Theory (3) Detailed examination and analysis of a selected major work, thinker, or tradition in the history of political theory.

Effective: Spring 2008

Prerequisite: PL SC 017 or PL SC 007

PL SC 435W

Foundations of American Political Theory (3) Political theories of the revolutionary and constitutional periods presented through works of selected political thinkers and political issues.

Effective: Spring 2001

Prerequisite: PL SC 001 PL SC 017 or PL SC 007

PL SC 445Y (AF AM 445Y, LER 445Y) (US)

Politics of Affirmative Action (3) Examines history, politics, and economics of the use of special programs to advance racial interests in the U.S.

Effective: Fall 2012

Prerequisite: AAA S 100 level course and PL SC 001 or PL SC 007

PL SC 465Y (ASIA 465Y) (IL)

Democratization in Asia (3) A course which identifies components of democracy, such as definitions, measures, datasets, and the democratization process.

Effective: Spring 2016

Prerequisite: PL SC 003 or ASIA 100

PL SC 470W

Legal Brief Writing (3) Writing of legal briefs as practiced in American courts.

Effective: Spring 1998

Prerequisite: PL SC 001

PL SC 480W

Congress and the Presidency (3) Basic characteristics and processes of the national legislature and executive; roles and interaction of these institutions in the policy process.

Effective: Fall 2007

Prerequisite: PL SC 001

PL SC 484W

The Foreign Policy of Soviet Successor States (3) Relations between Russia and The Newly Independent States (NIS); Russia's relations with selected foreign states and political Institutions; regional impact of the NIS in Baltic, Asian, and Central Asian areas.

Effective: Fall 2007

Prerequisite: PL SC 003

PSYCH 301W

Basic Research Methods in Psychology (4) Introduction to methods of psychological research, with special attention to hypothesis formation and testing, threats to validity, and data presentation.

Effective: Spring 2007

Prerequisite: PSYCH 100 ; PSYCH 200 or STAT 200

PSYCH 406W

Advanced Research Projects in Psychology (4) Advanced methodology focusing on the logic and practice of research culminating in the completion of a student designed research project.

Effective: Spring 2007

Prerequisite: PSYCH 301W

PUBPL 304W

Public Policy Analysis (3) The use of analytic models for describing and explaining the forces shaping policy and the consequence of policy decisions.

Effective: Spring 2004

R M 320W

Risk Management and Insurance (3) Goals and methods of risk management. Commercial insurance and alternative risk transfer (ART) methods in addition to the characteristics of insurance markets and intermediaries used by risk managers.

Effective: Summer 2011

Prerequisite: R M 301

R M 330W

Real Estate Risk Analysis (3) Risk and value associated with real estate decision making, which includes purchasing, leasing renovation, financing, and investing.

Effective: Summer 2011

Prerequisite: R M 301

RADSC 210W

Radiographic Pathology (3) Writing intensive study of theories of disease causation and the pathophysiology disorders compromising health systems with emphasis on radiographic presentation.

Effective: Fall 2002

Prerequisite: BIOL 129 BIOL 141

RHS 400W

Case Management and Communication Skills (3) Principles and practices of obtaining, recording, evaluating, and utilizing case data in rehabilitation planning; implementation of rehabilitation plans.

Effective: Summer 2011

Prerequisite: RHS 300

RL ST 125W (GH)

Modern Christianity (3) Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the sixteenth century to the present.

Effective: Summer 1995

RL ST 132W

Sects and Cults (3) The origins, beliefs, and practices of new or dissenting religious groups and their relationship to the dominant religious culture.

Effective: Spring 1994

RL ST 140Y (AM ST 140Y) (GH;US)

Religion in American Life and Thought (3) The function, contributions, tensions, and perspectives of religion in American culture.

Effective: Summer 2005

RL ST 407Y (HIST 409Y, J ST 409Y) (IL)

Antisemitisms (3) Surveys the history of anti-Semitism from antiquity through the Middle Ages to the present.

Effective: Fall 2015

RL ST 425W (CAMS 425W, J ST 425W)

Books of the Bible: Readings and Interpretation (3 per semester/maximum of 12) Study of a biblical book/topic in terms of literary, historical, and cultural contexts, history of interpretation, and critical scholarship.

Effective: Summer 2015

Prerequisite: 3 credits in CAMS or J ST or RL ST recommended CAMS/J ST/RL ST 110 or 120; or ENGL 104

RL ST 440Y (US;IL)

The Orthodox Christian Tradition (3) History, culture, and beliefs of the Eastern Orthodox religious tradition with special reference to Russia.

Effective: Summer 2011

Prerequisite: RL ST 004 RL ST 124 RL ST 125 RUS 100 or RUS 110

RL ST 471Y (HIST 471Y) (IL)

Classical Islamic Civilization, 600-1258 (3) Pre-Islamic Arabia; Muhammad; Arab conquest; Islamic beliefs and institutions; literary, artistic, and scientific achievements; relations with Europe; breakdown of unity.

Effective: Spring 2006

RPTM 300Y (IL)

Tourism and Leisure Behavior (3) Examination of the impact of recreational sociocultural, governmental, economic, and physical environment on the leisure traveler within the tourism industry.

Effective: Summer 2005

RPTM 433W

Program Evaluation and Research in Recreation Services (3) Systematic, structured problem-solving process for decision making in recreation and parks. Research techniques/evaluation procedures; quantitative, qualitative methodologies; deductive, inductive reasoning.

Effective: Spring 2005

Prerequisite: RPTM 356 3 credits in statistics

RUS 141Y (IL)

Russian Literature in English Translation: 1800-1870 (3) Pushkin, Lermontov, Gogol, the critics, Turgenev, Dostoevsky, Tolstoy. Writing assignments will serve as a major way of exploring subject matter.

Effective: Spring 2006

RUS 142Y (IL)

Russian Literature in English Translation: 1870 to Present (3) Dostoevsky, Tolstoy, Chekhov, Gorky, symbolists, selected Soviet authors. Writing assignments will serve as a major way of exploring subject matter.

Effective: Spring 2006

S T S 427W

Society and Natural Resources (3) Analysis of the relationship between societal development and enhancement and natural resources.

Effective: Fall 2015

Prerequisite: R SOC 011 or SOC 001

SCIED 411W

Teaching Secondary Science I (3) Introduction to teaching secondary school science, including curriculum, learning theory, media, evaluation as they relate to student progress.

Effective: Spring 2016

Prerequisite: C I 295 ; appropriate courses for certification option and approval of department

SCM 450W

Strategic Design and Management of Supply Chains (3) Strategic design and management of supply chains.

Effective: Fall 2011

Prerequisite: SCM 421

SO SC 480W

Quantitative Methods in the Social Sciences (4) Students will learn to conduct, analyze and write up quantitative social scientific research according to appropriate professional standards.

Effective: Spring 2008

Prerequisite: permission of program

SOC 001W (GS)

Introductory Sociology (3) The nature and characteristics of human societies and social life.

Effective: Fall 1998

SOC 400W

Senior Research Seminar (3) Major concepts and principles of sociology through reading, data analysis, and writing.

Capstone course for senior Sociology majors.

Effective: Fall 2001

Prerequisite: SOC 470

SOILS 412W

Soil Ecology (3) Introduction to soil organisms; includes interactions between organisms, their processes, and metabolism with a major focus on microorganisms.

Effective: Summer 2013

Prerequisite: BIOL 011 BIOL 127 or BIOL 110

SPAN 131Y (GH;US;IL)

Ibero-American Civilization (3) Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.

Effective: Summer 2005

SPAN 253W

Introduction to Hispanic Literature (3) Introduction to generic distinctions, critical methods, and approaches to Hispanic literature.

Effective: Spring 2008

Prerequisite: SPAN 100 and SPAN 110

SPLED 395W

Observing in Exceptional Settings (3) Observations of exceptional persons and techniques used by their teachers in a variety of settings, e.g., school, day care, vocational.

Effective: Summer 2011

Prerequisite: EDPSY 101 . PA Act 34 clearance required. In addition non-Pennsylvania residents must provide evidence of an FBI background information check. (Forms: 228 Chambers)

SRA 440W

Security and Risk Analysis Capstone Course (3) The Security and Risk Analysis Capstone course is designed to provide IST students enrolled in the SRA major to experience a semester-long security and risk problem-solving experience, providing realistic security dilemmas requiring a solution process that is well suited for teamwork and collaboration.

Effective: Spring 2014

Prerequisite: SRA 221 and SRA 311 ; ENGL 202C or ENGL 202D seventh-semester standing (this course is intended for seniors) and the five common course requirements plus at least three of the required courses in an option

SS ED 412W

Teaching Secondary Social Studies II (3) Writing-intensive course focusing on study of the social studies teacher's role in planning instruction; strategies for teaching.

Effective: Summer 2010

Prerequisite: SS ED 411

SS ED 430W

Teaching Social Studies in the Elementary Grades (3) Principles underlying use of social studies in the elementary school; practical demonstration of desirable methods.

Effective: Spring 2014

Prerequisite: LL ED 400 LL ED 401 LL ED 402 nine credits in history and the social sciences

STAT 470W

Problem Solving and Communication in Applied Statistics (3) Provide problem solving and communication skills through development of writing ability, interaction with peers and the SCC, and oral presentations.

Effective: Spring 2015

Prerequisite: STAT 461 STAT 462 STAT 480 or STAT 483

SUR 372W

Legal Aspects of Land Surveying (3) Legal research; rules of evidence including classification and evaluation; unwritten rights; land description composition; easements.

Effective: Spring 1994

Prerequisite: SUR 272

SWENG 452W

Embedded Real Time Systems (3) The design and implementation of real time systems.

Effective: Summer 2008

Prerequisite: CMPSC 472 or CMPSC 473 or CMPEN 441

THEA 405W (US)

Theatre History: American Theatre (3) Survey of American drama and theatre from the colonial period to the present.

Effective: Fall 2016

Prerequisite: THEA 100

THEA 407W (WMNST 407) (US)

Women and Theatre (3) A study of theatre practice and dramatic literature as informed by issues of gender, race, and ethnic background.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: THEA 100 or THEA 105

THEA 408W (US)

History of American Musical Theatre (3) A survey of the history of American musical theatre presented in a social, cultural, and aesthetic prospective.

Effective: Fall 2016

Prerequisite: THEA 100 or THEA 105

TURF 436W

Case Studies in Turfgrass Management (3) Case study and discussion considering integrated management of selected turfgrass sites; emphasis on problem analysis, principle application, and decision making.

Effective: Spring 2014

Prerequisite: TURF 238 TURF 425

VB SC 402W (ENT 402W)

Biology of Animal Parasites (3) An introduction to animal parasitology. Emphasis placed on host/parasite interactions, parasites of zoonotic importance, control programs and taxonomy.

Effective: Spring 2010

Prerequisite: BIOL 110

VB SC 423W

Pathology of Nutritional and Metabolic Diseases (3) Overview of nutritional and metabolic diseases of animals integrating concepts from biochemical and physiologic aberrations to clinical applications.

Effective: Spring 2008

Prerequisite: B M B 211 or B M B 401 AN SC 301 or equivalent nutrition course

VB SC 448W

Current Topics in Immunology (3) Study of current approaches and questions driving research in immunology and infectious diseases.

Effective: Fall 2007

Prerequisite: MICRB 410 B M B 400

W F S 447W

Wildlife Management (3) Management of renewable wildlife resources by applying ecological concepts, habitat evaluation, and decision-making; writing and editing reports are emphasized.

Effective: Summer 2013

Prerequisite: W F S 209 or W F S 309

W F S 463W

Fishery Management (3) Management of sport and commercial fisheries, including biological, political, social, and economic factors; regulations and other management techniques.

Effective: Summer 2013

Prerequisite: W F S 209 W F S 300 W F S 301 W F S 310

W P 200W

Professional Careers in Forest Resources (3) Introduction to managing forests for products and services to meet human needs; developing career goals and an academic plan.

Effective: Spring 2014

WF ED 207W

Assessment Techniques (3) Assessment, recording, and reporting of learning in an integrated competency based vocational education system.

Effective: Summer 1996

Prerequisite: WF ED 105

WILDL 208W

Terrestrial Wildlife Management (3) Ecological characteristics and manipulation of terrestrial habitats; control of wildlife populations.

Effective: Summer 2013

Prerequisite: FORT 150 FORT 160 WILDL 101 WILDL 103 WILDL 106 WILDL 204

WL ED 412W

Methods of Teaching World Languages in Grades 6-12 (3) Exploring the complexity of teaching World Languages and development of curricular designs for teaching World Languages in grades 6-12.

Effective: Spring 2010

Prerequisite: WL ED 411 WL ED 495B

WMNST 213Y (HIST 213Y, AF AM 213Y) (GH;US)

African American Women's History (3) This course examines the social, political, and economic history of African American women in the United States from slavery to the present.

Effective: Spring 2015

WMNST 266Y (HIST 266Y) (GH;US)

Sex and Violence in Nineteenth-Century America (3) Historical Overview of Sex and Violence in the Nineteenth-Century United States.

Effective: Spring 2015

WMNST 407W (THEA 407) (US)

Women and Theatre (3) A study of theatre practice and dramatic literature as informed by issues of gender, race, and ethnic background.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: THEA 100

WMNST 426Y (GEOG 426Y) (US;IL)

Gender Geographies (3) Description and explanation of the links between gender relations and spatial structures; gender and work, social services, and neighborhood activism.

Effective: Fall 2013

Prerequisite: GEOG 020 GEOG 126 GEOG 120 WMNST 100

WMNST 450W (CAMS 450W) (IL)

Gender and Sexuality in Ancient Greece and Rome (3) An examination of gender, sexuality, and sexual desire in ancient Greece and Rome.

Effective: Spring 2016

Prerequisite: 3 credits in CAMS

WMNST 492W

Contemporary Feminist Analysis: The Capstone Senior Seminar (3) Applied critical analysis of any aspect of society and/or culture from a contemporary feminist perspective.

Effective: Spring 2013

Prerequisite: WMNST 001 WMNST 301 WMNST 400

First-Year Seminar

All course descriptions are updated periodically.

120 courses.

A E 124S

Architectural Engineering Orientation (1) Introduction to architectural engineering; lectures and discussions with special reference to the relation of architectural engineering to the building industry.

Effective: Fall 1999

A ED 101S

Introduction to Art Education (3) This course introduces students to issues, concepts, and ideas in Art Education.

Effective: Summer 2002

AERSP 001S

Aerospace Explorer--First-Year Seminar (1) First-Year Seminar explores aerodynamics, structural mechanics, flight mechanics, rotorcraft systems, high performance computers, air/space propulsion, and space systems.

Effective: Fall 1999

AF AM 083S (GH;US;IL)

First-Year Seminar in African American Studies (3) Cultural, philosophical, economic, political, and global dynamics of the Black experience in the United States and the Diaspora.

Effective: Fall 2013

AG 150S

Be a Master Student! (2) Students explore agricultural issues and research methodologies through literature review, library searches, field studies, and critical thinking.

Effective: Summer 1999

Prerequisite: first- or second-semester standing

AG 160S (GH)

Introduction to Ethics and Issues in Agriculture (3) Introduce students to the University and College of Ag Sciences preparing them to succeed. Review ethical theories and issues in American agriculture.

Effective: Summer 2012

Prerequisite: fifth- or second semester standing

AM ST 083S (GH)

First-Year Seminar in American Studies (3) Critical approaches to the interdisciplinary study of American culture.

Effective: Summer 1999

AN SC 110S

Contemporary Issues in Animal Biotechnology and Society (1) An introductory survey of animal biotechnology in society, the role for biotechnology and how it will benefit society.

Effective: Summer 2013

ANTH 083S (GS)

First-Year Seminar in Anthropology (3) This seminar introduces students to anthropology as a scientific discipline with ties to other social and natural sciences.

Effective: Summer 1999

APLNG 083S (GS;US;IL)

First-Year Seminar in Applied Linguistics (3) Introduction to the application of theories of language to cognition, culture, gender, society, and second language acquisition.

Effective: Summer 2005

ARCH 131S

Basic Design Studio I (4) An introduction to the basic concepts, methods, and skills of architectural design in a project-based, active learning, studio environment.

Effective: Summer 2008

Prerequisite: or concurrent ARCH 121

ART 011S

First-Year Seminar-School of Visual Arts (1) Facilitate student's adjustment to the high expectations, demanding workload, increased academic liberties, and other aspects of the transition to college life.

Effective: Spring 2016

ART H 001S (GA)

First-Year Seminar (3) An introduction to the field of art history, through an examination of a selected issue in a seminar setting.

Effective: Fall 2000

ASIA 083S (GH;IL)

Asian Studies First Year Seminar (3) The meaning and advantages of a Liberal Arts education in context of a specific discipline.

Effective: Fall 2015

ASTRO 020S

First-Year Astronomy Seminar (2) Introduction to the study of modern astronomy through discussions, activities, and writing.

Effective: Summer 1999

AYFCE 211S (GS;US;IL)

Foundations: Civic and Community Engagement (3) Conceptual foundations of public scholarship and orientation to contemporary themes and issues in civic and community engagement.

Effective: Summer 2013

B A 100S (GS)

Introduction to Business (3) A comprehensive view of the contemporary environment of business.

Effective: Fall 2009

B E 001S

Growing Your Future--First-Year Seminar (1) First-year seminar to introduce students to the breadth of the agricultural and biological engineering profession, including bioprocessing, machinery, and natural resources.

Effective: Fall 2015

Prerequisite: first-year status

BB H 019S

Health and Disease (1) Essentials of communicable and chronic disease control.

Effective: Spring 2005

BB H 148S

Coping with College: A First Year Transition Seminar (2) Exploration of effective learning strategies, university resources, academic requirements and planning, career development issues in discussion-centered environment.

Effective: Summer 1999

BIOL 110S (GN)

Biology: Basic Concepts and Biodiversity (4) A study of the evolution of the major groups of organisms including the fundamental concepts of biology. This course also fulfills the First-Year Seminar requirements.

Effective: Summer 1999

BME 100S

Biomedical Engineering Seminar (1) First-year seminar to introduce the students to the field of biomedical engineering, and related opportunities in research, and industry.

Effective: Fall 2014

C E 100S

Topics and Contemporary Issues in Civil and Environmental Engineering: First-Year Seminar (1) First-Year Seminar exploring a specific topic or contemporary issue in civil and environmental engineering.

Effective: Fall 1999

CAMS 083S (GH;IL)

First-Year Seminar in Classics and Ancient Mediterranean Studies (3) Critical approach to the study of ancient Mediterranean languages, literatures, and/or material cultures.

Effective: Summer 2005

CAP 100S

Orientation to the Undergraduate Experience (1) To facilitate transition of new students through active engagement and introduction to university and campus resources.

Effective: Fall 2004

CAP 110S

First-Year Seminar for Capital College, The School of Behavioral Sciences and Education (1) Introduction to Penn State culture, information literacy and collaboration skills, and introduction to majors and careers relevant to the discipline.

Effective: Spring 2003

CAP 120S

First-Year Seminar for Business (1) Introduction to Penn State culture, information literacy and collaboration skills, and introduction to majors and careers relevant to the discipline.

Effective: Spring 2003

CAP 140S

First-Year Seminar for Humanities (1) Introduction to the discipline including: ethics, research methods, communications, career opportunities/issues and applied technology.

Effective: Summer 1999

Prerequisite: or concurrent: CAP 100S

CAP 150S

First-Year Seminar for Capital College, The School of Public Affairs (1) Introduction to Penn State culture, information literacy and collaboration skills, and introduction to majors and careers relevant to the discipline.

Effective: Spring 2003

CAP 160S

First-Year Seminar for Capital College, The School of Science, Engineering and Technology (1) Introduction to Penn State culture, information literacy and collaboration skills, and introduction to majors and careers relevant to the discipline.

Effective: Spring 2004

CAS 083S (GS)

First-Year Seminar in Speech Communication (3) Introduction to major theoretical, critical, research and pedagogical issues in human communication.

Effective: Fall 2003

CAS 084S (GH)

First-Year Seminar in Communication Arts and Sciences (3) Introduction to significant issues surrounding effective human communication; humanities emphasis.

Effective: Summer 2002

CAS 100S (GWS)

Effective Speech (3) Principles of communication, implemented through presentation of speeches, with some attention to group discussion and message evaluation.

Effective: Fall 2003

CH E 100S

Exploring Chemical Engineering First-Year Seminar (1) The exploration of Chemical Engineering and available career opportunities.

Effective: Summer 2007

CMLIT 083S (GH;IL)

First-Year Seminar in Comparative Literature (3) International topics in literature and culture; each seminar will have a specific topic as announced (see the Comparative Literature Web site).

Effective: Summer 2005

CMPEN 111S

Computers and Computer Hardware (1) A brief orientation to University life and resources and an introduction to computers and computer hardware.

Effective: Spring 2009

CMPSC 111S

Logic for Computer Science (1) An introduction to logic and its application to problem solving and computer science.

Effective: Spring 2009

COMM 100S (GS)

The Mass Media and Society (3) Mass communications in the United States: organization, role, content, and effects of newspapers, magazines, television, radio, books, and films.

Effective: Fall 2005

CRIMJ 083S (GS)

First-Year Seminar in Criminal Justice (3) Critical approaches to issues in criminal justice and criminology.

Effective: Spring 2015

E E 007S

Adventures in Electrical Engineering (1) Exploration of electrical engineering through several hands-on activities that cover a broad spectrum of applications and fundamental concepts.

Effective: Fall 1999

E E 008S

Introduction to Digital Music (1) First-year seminar that discusses digital music from an electrical engineering perspective; topics include sampling, digital filtering, compression, and music synthesis.

Effective: Fall 2001

E E 009S

First-Year Seminar in Electrical Engineering (1) First-year seminar covering a variety of Electrical Engineering topics that vary from year to year.

Effective: Spring 2008

E SC 120S

Design for Failure--First-Year Seminar (1) This seminar, through the utilization of commonly used examples, discusses the engineering principles which are exploited by such designs.

Effective: Summer 2000

E SC 121S

Science/Engineering Fiction and the Engineering Sciences--First-Year Seminar (1) Examines the technology predictions of authors in view of the engineering sciences on which the underlying devices of their stories are based.

Effective: Summer 2000

E SC 122S

Weird, Wild, and Wonderful Materials and Devices--First-Year Seminar (1) First-year seminar that surveys the use of novel materials and material systems to create practical devices.

Effective: Summer 2000

E SC 123S

Catastrophic Failures--First-Year Seminar (1) First-year seminar that explores design deficiencies through the study of case histories of a number of famous failures.

Effective: Summer 2000

ECON 083S (GS)

First-Year Seminar in Economics (3) Experiments in microeconomic principles.

Effective: Summer 1999

EDSGN 011S

Explorations in Design First-Year Seminar (1) Students explore topical issues in engineering design.
Effective: Spring 2007

EDSGN 012S

Solar Racers First-Year Seminar (1) Students explore solar energy engineering by designing, building, testing, and racing a model car powered by a photovoltaic panel.
Effective: Spring 2007

EDSGN 013S

Ethics of Star Trek First-Year Seminar (1) The Star Trek television series is used as an introduction to ethics, with application to student life and engineering practice.
Effective: Spring 2007

EDSGN 015S

Transformations by Design: First-Year Seminar (1) Examination of the social and environmental transformations that follow engineering design, and of the transformations of students by higher education.
Effective: Spring 2007

EDSGN 100S

Introduction to Engineering Design (3) Introduction to engineering design processes, methods, and decision making using team design projects; design communication methods including graphical, verbal, and written.
Effective: Fall 2007

EDTHP 115S (GS;US)

Competing Rights: Issues in American Education (3) An examination of educational issues relevant to democratic citizenship; emphasis is on understanding the relationship among politics, schools, and society.
Effective: Spring 2006

EDUC 100S

First-Year Seminar in Education (3) Learning about a scholarly community through the development of knowledge and skills needed for successful participation in higher education.
Effective: Fall 2007

EET 002S

Introduction to Engineering Technology (1) Introduction to engineering technology and the use of computer methods for analyzing and solving engineering technology problems; microcomputer fundamentals, word processing, spreadsheet, and database software packages.
Effective: Fall 2007

EM SC 100S (GWS)

Earth and Mineral Sciences First-Year Seminar (3) Writing, speaking, and critical thinking skills applied to topics of general interest in Environmental and Materials Science.
Effective: Spring 2001

ENGL 003S (GH)

The Great Traditions in American Literature (3) Major works of fiction, drama, and poetry from the colonial to the modern periods expressing enduring issues and values.
Effective: Fall 2002

ENGL 015S (GWS)

Rhetoric and Composition (3) Instruction and practice in writing expository prose that shows sensitivity to audience and purpose.
Effective: Summer 1999
Prerequisite: ENGL 004 or satisfactory performance on the English proficiency examination

ENGL 030S (GWS)

Honors Freshman Composition (3) Writing practice for specially qualified and screened students. Students who have passed a special writing test will qualify for this course.
Effective: Spring 2003

ENGL 083S (GH)

First-Year Seminar in English (3) Critical approaches to the dimensions and directions in English/American literature and rhetoric.
Effective: Summer 1999

ENGL 135S (GH;US)

Alternative Voices in American Literature (3) United States writers from diverse backgrounds offering varying responses to issues such as race, class, gender, and ethnicity.
Effective: Summer 2005

ENGL 139S (GH;US)

Black American Literature (3) Fiction, poetry, and drama, including such writers as Baldwin, Douglass, Ellison, Morrison, and Wright.
Effective: Fall 2006

ENGL 184S (GH;IL)

The Short Story (3) Lectures, discussion, readings in translation, with primary emphasis on major writers of the nineteenth and twentieth centuries.
Effective: Spring 2006

ENGL 194S (GH;US;IL)

Women Writers (3) Short stories, novels, poetry, drama, and essays by English, American, and other English-speaking women writers.

Effective: Summer 2005

ENGR 100S

Introduction to Engineering (1) A seminar providing information about different engineering majors, coping with college life, and exploring educational and career goals.

Effective: Fall 1999

FORT 100S

Introduction to Forestry (1) A general introduction to forest ecology, history, management, and practices.

Effective: Summer 2013

FR 083S (GH;IL)

First-Year Seminar in French (3) Critical approaches to the dimensions and directions in French/Francophone literatures and cultures.

Effective: Summer 2005

GD 001S

First-Year Seminar in Graphic Design (1) An orientation to the historical, social, and professional context of design and an exposure to a variety of ethical, philosophical, and topical ideas from the world of design.

Effective: Summer 2007

Prerequisite: admission to the AADES program

GER 083S (GH;US;IL)

First-Year Seminar in German (3) Germany's cultural past and present.

Effective: Summer 2005

HD FS 129S (GS)

Introduction to Human Development and Family Studies (3) Introduction to psychosocial and family development at all stages of the individual and family life cycle.

Effective: Summer 2006

HIST 083S (GH)

First-Year Seminar in History (3) Critical approaches to the dimensions and directions in History.

Effective: Summer 1999

I E 100S

Discover Industrial Engineering: First-Year Seminar (1) Informational First-year on Industrial Engineering as a career choice and profession; lab exercises; guest speakers; real world problems.

Effective: Fall 1999

INTST 100S (GS;IL)

Introduction to International Studies (3) An introductory multidisciplinary course designed to familiarize students with critical international issues.

Effective: Summer 2005

IST 111S

Seminar in Information Sciences and Technology (1) Introduction to academic requirements, career planning, and information literacy for students majoring in the College of Information Sciences and Technology.

Effective: Spring 2001

IT 083S (GH;IL)

First-Year Seminar in Italian Literature, Film, and Culture (3) Introduction to the study of Italian literature, film, and culture.

Effective: Summer 2005

J ST 083S (GH;IL)

First-Year Seminar in Jewish Studies (3) Critical approaches to the history, sociology, and literature of Jewish Studies.

Effective: Summer 2005

KINES 017S (GHA)

Ballroom Dance (1.5) A course designed to provide students with basic dance skills and an understanding and appreciation of ballroom dance.

Effective: Fall 2007

KINES 061S (GHA)

Fitness Theory and Practice (3) Students will learn about the science of fitness/wellness; evaluate their present fitness levels and create a personal fitness plan.

Effective: Summer 2005

L A 083S

First Year Seminar in the Liberal Arts (1) An exploration of a theme through the lens of the humanities, social sciences and diverse cultural perspectives.

Effective: Summer 2013

Prerequisite: open only to DUS students

L A 100S

Contemporary Legal Issues (3) An introduction to law-related issues with a focus on current legal topics viewed from an

across discipline perspective.
Effective: Summer 2013

L ST 083S

The Twenty-First Century Researcher (1) Students learn to use technology and Libraries resources to access and cite relevant information into academic research projects.
Effective: Fall 2009

LARCH 121S

Landscape Architecture Orientation Seminar (1) Introductory seminar involving readings on significant issues in landscape architecture. LARCH majors only.
Effective: Spring 2007

LER 083S (GS)

First-Year Seminar in Labor Studies and Employment Relations (3) Critical approaches to the dimensions and direction in Labor and Employment Relations.
Effective: Spring 2008

M E 101S

Toy Fundamentals: First-Year Seminar (1) First-Year Seminar focusing on toy design and manufacture.
Effective: Fall 1999

M E 102S

Smart Lego Robots & Design (1) First-Year Seminar focusing on the development of technology exploration kits for middle-school-aged children.
Effective: Fall 2004

M E 105S

Product Dissection A: Bicycles--First-Year Seminar (1) A First-Year Seminar in which students analyze and disassemble a multi-speed bicycle.
Effective: Fall 1999

M E 106S

Product Dissection B: Household Appliances--First-Year Seminar (1) A First-Year Seminar in which students analyze and disassemble household appliances.
Effective: Fall 1999

M E 107S

Product Dissection C: The Enigmatic Engine--First-Year Seminar (1) A First-Year Seminar in which students analyze and disassemble a single-cylinder lawnmower engine.
Effective: Fall 1999

M E 190S

Special Topics in Mechanical Engineering: First-Year Seminar (1) A First-Year Seminar focusing on issues related to Mechanical Engineering.
Effective: Fall 1999

MGMT 001S

Business Leadership (3) The aim of this course is to introduce fundamental concepts of business management and leadership.
Effective: Spring 2000

MUSIC 005S (GA)

An Introduction to Western Music (3) A general survey of art music in western society, highlighting important composers and stylistic developments.
Effective: Summer 2006

MUSIC 040S

First-Year Seminar in Music Education (1) Introduction to the University, the School of Music, the music education degree program, and the music teaching profession.
Effective: Fall 2006

MUSIC 119S

First-Year Music Seminar (2) Individual applied instruction and group activities; orientation, area recitals, and studio classes as required by instructor.
Effective: Summer 1999
Prerequisite: permission of instructor

MUSIC 129S

First-Year Performance Seminar (3) Individual applied instruction and group activities; orientation, area recitals, and studio classes as required by instructor.
Effective: Summer 1999
Prerequisite: permission of instructor

MUSIC 173S

First-Year Composition Seminar (2) Individual composition instruction for freshman composition majors (Fall semester) and group activities.
Effective: Summer 1999
Prerequisite: admission to the BM degree in Composition

NUC E 001S

Atomic Adventures: First-Year Seminar (1) First-year seminar exploring the interesting and exciting world of nuclear science and its applications.
Effective: Fall 1999

NURS 111S (US;IL)

Nursing Roles (4) Introduction to nursing roles/process with emphasis on societal norms and multicultural influences on health care needs.

Effective: Spring 2011

Prerequisite: admission to 2NURS major

O T 100S

Structural Foundations of Occupational Therapy (1) An overview of the structural foundations of the occupational therapy profession.

Effective: Spring 2011

P T 100S

Physical Therapist Assistant-Introduction (3) Orientation to the field of physical therapy, historical background of the profession, professional ethics, medical terminology, and patient care techniques with First Year Seminar requirements.

Effective: Fall 2016

Prerequisite: Prerequisite or Concurrent: BIOL 129

P T 101S

Introduction to Computer Skills for the PTA (1) Introduction to basic computer skills for the physical therapist assistant.

Effective: Fall 2011

PHIL 010S (GH)

Critical Thinking (3) Discussion of the validity, soundness, and fallacies of everyday language use and reasoning; informal logic; and manipulative arguments and propaganda.

Effective: Spring 2005

PHIL 083S (GH)

First-Year Seminar in Philosophy (3) Critical introduction to philosophical issues in ethics, social and political theory, religion, art, metaphysics, and epistemology.

Effective: Summer 1999

PL SC 083S (GS)

First-Year Seminar in Political Science (3) Exploration of current topics of interest in political science, international relations, and/or political theory.

Effective: Summer 1999

PSU 008S

First-Year Seminar University College (1-3) Facilitate student's adjustment to the high expectations, demanding workload, increased academic liberties, and other aspects of the transition to college life.

Effective: Spring 2015

PSYCH 083S (GS)

First-Year Seminar in Psychology (3) Scientific, societal, and individual implications of contemporary psychological theory.

Effective: Spring 2007

PSYCH 100S (GS)

Introductory Psychology (3) Introduction to general psychology; principles of human behavior and their applications.

Effective: Spring 2007

RL ST 083S (GH)

First-Year Seminar in Religious Studies (3) Critical approaches to the dimensions and directions in Religious Studies.

Effective: Summer 1999

RPTM 100S

Introduction to Golf Management (2) First year seminar for students enrolled in the Professional Golf Management option of RPTM.

Effective: Summer 2014

RUS 083S (GH;US;IL)

First-Year Seminar in Russian (3) Russia's cultural past and present.

Effective: Summer 2005

S T S 200S (GS)

Critical Issues in Science, Technology, and Society (3) An overview of interactions between science, technology, and society from social sciences and humanities perspectives.

Effective: Summer 1999

SOC 001S (GS)

Introductory Sociology (3) The nature and characteristics of human societies and social life.

Effective: Spring 2006

SOC 083S (GS)

First-Year Seminar in Sociology (3) Critical approaches to issues in the structure of society.

Effective: Summer 1999

SPAN 083S (GH;IL)

First-Year Seminar in Hispanic Literatures and Cultures (3) Introduction to the study of Hispanic literatures and cultures.

Effective: Summer 2005

SRA 001S

First-Year Seminar in Security and Risk Analysis (1) Provides introduction to the field of Security and Risk Analysis and assessments of key skills.

Effective: Summer 2006

THEA 001S

First-Year Seminar: Theatre Production Practices (1) An orientation to the School of Theatre production practices, resources, faculty, and practicum.

Effective: Spring 2006

Prerequisite: admission into Theatre Program

THEA 208S (GA;US;IL)

Workshop: Theatre in Diverse Cultures (3) A performance-oriented class, which explores the historic and contemporary theatrical works of various culturally diverse peoples.

Effective: Summer 2005

VB SC 050S

Mechanisms of Disease (3) Introduction to the study of disease pathogenesis and careers in Animal Health Research and Service.

Effective: Fall 2007

WILDL 106S

Wildlife Management Techniques (4) Overview of laboratory and field techniques for natural resource research and management.

Effective: Summer 2013

Prerequisite: WILDL 101

WMNST 001S (GS;US;IL)

Introduction to Women's Studies (3) Interdisciplinary consideration of the scholarly theories and research pertaining to women's experiences and women's status in contemporary American society.

Effective: Fall 2009

WMNST 083S (GH;US;IL)

First-Year Seminar in Women's Studies (3) Critical approaches to the dimensions and directions in Women's Studies.

Effective: Summer 2005

Writing/Speaking

All course descriptions are updated periodically.

30 courses.

A S M 391 (B E 391) (GWS)

Contextual Integration of Communication Skills for the Technical Workplace (2) To develop corporate communication skills in technically focused students in a contextual manner.

Effective: Fall 2008 Ending: Fall 2016

Prerequisite: Junior level standing in B E or A S M

A S M 392 (B E 392) (GWS)

Contextual Integration of Leadership Skills for the Technical Workplace (2) To develop corporate leadership skills in technically focused students in a contextual manner.

Effective: Fall 2008 Ending: Fall 2016

Prerequisite: A S M 391 junior level standing in B E or A S M

B E 391 (A S M 391) (GWS)

Contextual Integration of Communication Skills for the Technical Workplace (2) To develop corporate communication skills in technically focused students in a contextual manner.

Effective: Fall 2008 Ending: Fall 2016

Prerequisite: Junior level standing in B E or A S M

B E 391 (BRS 391) (GWS)

Contextual Integration of Communication Skills for the Technical Workplace (2) To develop corporate communication skills in technically focused students in a contextual manner.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: Junior level standing in B E or BRS

B E 392 (A S M 392) (GWS)

Contextual Integration of Leadership Skills for the Technical Workplace (2) To develop corporate leadership skills in technically focused students in a contextual manner.

Effective: Fall 2008 Ending: Fall 2016

Prerequisite: B E 391 junior level standing in B E or A S M

B E 392 (BRS 392) (GWS)

Contextual Integration of Leadership Skills for the Technical Workplace (2) To develop corporate leadership skills in technically focused students in a contextual manner.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: B E 391 junior level standing in B E or BRS

BRS 391 (B E 391) (GWS)

Contextual Integration of Communication Skills for the Technical Workplace (2) To develop corporate communication skills in technically focused students in a contextual manner.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: Junior level standing in B E or BRS

BRS 392 (B E 392) (GWS)

Contextual Integration of Leadership Skills for the Technical Workplace (2) To develop corporate leadership skills in technically focused students in a contextual manner.

Effective: Spring 2017 Future: Spring 2017

Prerequisite: BRS 391 junior level standing in B E or BRS

CAS 100 (GWS)

Effective Speech (3) Introduction to speech communication: formal speaking, group discussion, analysis and evaluation of messages.

Effective: Fall 2003

CAS 100A (GWS)

Effective Speech (3) Principles of communication, implemented through presentation of speeches, with some attention to group discussion and message evaluation.

Effective: Fall 2003

CAS 100B (GWS)

Effective Speech (3) Principles of communication, implemented through group problem solving, with some attention to formal speaking and message evaluation.

Effective: Fall 2003

CAS 100C (GWS)

Effective Speech (3) Principles of communication, implemented through analysis and evaluation of messages, with some attention to formal speaking and group discussion.

Effective: Fall 2003

CAS 100S (GWS)

Effective Speech (3) Principles of communication, implemented through presentation of speeches, with some attention to group discussion and message evaluation.

Effective: Fall 2003

CAS 137H (ENGL 137H) (GWS)

Rhetoric and Civic Life I (3) Within a liberal arts framework and with attention to public discourse-- speaking, writing, online communication, and visual presentation--this course instructs students in the arts, practices, and principles of rhetoric.

Effective: Summer 2012

CAS 138T (ENGL 138T) (GWS)

Rhetoric and Civic Life II (3) This course builds rhetorical skills in oral, written, visual, and digital contexts and introduces deliberation and advocacy in civic and disciplinary spheres.

Effective: Summer 2012

Prerequisite: ENGL 137H or CAS 137H

EM SC 100S (GWS)

Earth and Mineral Sciences First-Year Seminar (3) Writing, speaking, and critical thinking skills applied to topics of general interest in Environmental and Materials Science.

Effective: Spring 2001

ENGL 015 (GWS)

Rhetoric and Composition (3) Instruction and practice in writing expository prose that shows sensitivity to audience and purpose.

Effective: Fall 1991

Prerequisite: ENGL 004 or satisfactory performance on the English proficiency examination

ENGL 015A (GWS;US)

Rhetoric and Composition (3) Instruction and practice in writing expository prose that shows sensitivity to audience and purpose.

Effective: Summer 2005

Prerequisite: ENGL 004 or satisfactory performance on the English proficiency examination

ENGL 015S (GWS)

Rhetoric and Composition (3) Instruction and practice in writing expository prose that shows sensitivity to audience and purpose.

Effective: Summer 1999

Prerequisite: ENGL 004 or satisfactory performance on the English proficiency examination

ENGL 030 (GWS)

Honors Freshman Composition (3) Writing practice for specially qualified and screened students. Students who have passed a special writing test will qualify for this course.

Effective: Fall 1991

ENGL 030S (GWS)

Honors Freshman Composition (3) Writing practice for specially qualified and screened students. Students who have passed a special writing test will qualify for this course.

Effective: Spring 2003

ENGL 030T (GWS)

Honors Freshman Composition (3) Writing practice for specially qualified and screened students. Students who have passed a special writing test will qualify for this course.

Effective: Spring 2003

ENGL 137H (CAS 137H) (GWS)

Rhetoric and Civic Life I (3) Within a liberal arts framework and with attention to public discourse-- speaking, writing, online communication, and visual presentation--this course instructs students in the arts, practices, and principles of rhetoric.

Effective: Summer 2012

ENGL 138T (CAS 138T) (GWS)

Rhetoric and Civic Life II (3) This course builds rhetorical skills in oral, written, visual, and digital contexts and introduces deliberation and advocacy in civic and disciplinary spheres.

Effective: Summer 2012

Prerequisite: ENGL 137H or CAS 137H

ENGL 202A (GWS)

Effective Writing: Writing in the Social Sciences (3) Instruction in writing persuasive arguments about significant issues in the social sciences. (A student may take only one course for credit from ENGL 202A, 202B, 202C, and 202D.)

Effective: Summer 1996

Prerequisite: ENGL 015 or ENGL 030 ; fourth-semester standing

ENGL 202B (GWS)

Effective Writing: Writing in the Humanities (3) Instruction in writing persuasive arguments about significant issues in the humanities. (A student may take only one course for credit from ENGL 202A, 202B, 202C, and 202D.)

Effective: Summer 1996

Prerequisite: ENGL 015 or ENGL 030 ; fourth-semester standing

ENGL 202C (GWS)

Effective Writing: Technical Writing (3) Writing for students in scientific and technical disciplines. (A student may take only one course for credit from ENGL 202A, 202B, 202C, and 202D.)

Effective: Summer 1996

Prerequisite: ENGL 015 or ENGL 030 ; fourth-semester standing

ENGL 202D (GWS)

Effective Writing: Business Writing (3) Writing reports and other common forms of business communication. (A student may take only one course for credit from ENGL 202A, 202B, 202C, and 202D.)

Effective: Summer 1996

Prerequisite: ENGL 015 or ENGL 030 ; fourth-semester standing

ESL 015 (GWS)

ESL Composition for American Academic Communication II (3) For undergraduate students who are intermediate/advanced level non-native speakers of English to develop strategies for reading and writing American academic discourse.

Effective: Fall 2011

Prerequisite: a grade of C or higher required in ESL 004

L A 101H (GWS)

Honors Rhetoric and Civic Life (4) Within a liberal arts framework and with attention to public discourse-- speaking, writing, online communication, and visual presentation--this course instructs students in the arts, practices, and principles of rhetoric.

Effective: Fall 2009

Quantification

All course descriptions are updated periodically.

55 courses.

CMPSC 101 (GQ)

Introduction to C++ Programming (3) Properties of algorithms, languages, and notations for describing algorithms, applications of a procedure-oriented language to problem solving. A student may receive credit for only one of the following courses: CMPSC 101, 200, 201, 202, 121.

Effective: Fall 2010

Prerequisite: 2 entrance units in mathematics

CMPSC 121 (GQ)

Introduction to Programming Techniques (3) Design and implementation of algorithms. Structured programming. Problem solving techniques. Introduction to a high-level language, including arrays, procedures, and recursion.

Effective: Fall 2010

Prerequisite: MATH 110 or prerequisite or concurrent MATH 140

CMPSC 200 (GQ)

Programming for Engineers with MATLAB (3) Development and implementation of algorithms in a procedure-oriented language, with emphasis on numerical methods for engineering problems. A student may receive credit for only one of the following courses: CMPSC 101, 102, 200, 201, or 202.

Effective: Spring 2008

Prerequisite: MATH 140

CMPSC 201 (GQ)

Programming for Engineers with C++ (3) Development and implementation of algorithms in a procedure-oriented language, with emphasis on numerical methods for engineering problems. A student may receive credit for only one of the following courses: CMPSC 101, 102, 200, 201, or 202.

Effective: Spring 2008

Prerequisite: MATH 140

CMPSC 202 (GQ)

Programming for Engineers with FORTRAN (3) Development and implementation of algorithms in a procedure-oriented language, with emphasis on numerical methods for engineering problems. A student may receive credit for only one of the following courses: CMPSC 101, 102, 200, 201, or 202.

Effective: Spring 2008

Prerequisite: MATH 140

CMPSC 203 (GQ)

Introduction to Spreadsheets and Databases (4) Design, use, and programming of spreadsheets and data bases with applications from a range of disciplines.

Effective: Spring 2008

Prerequisite: 2 entrance units in mathematics

CMPSC 208 (GAME 250) (GQ)

Technical Game Development (3) Introduction to the tools and techniques required to implement games in a virtual environment.

Effective: Spring 2015

Prerequisite: MATH 021

CRIMJ 260 (GQ)

Statistical Analysis for the Social Sciences (3) Methods of collection, presentation, and analysis of quantitative data in the social science; procedures, interpretation, and application.

Effective: Spring 2011

Prerequisite: 2 units of High School Algebra and CRIMJ 100 or permission of the program

EDPSY 101 (GQ)

Analysis and Interpretation of Statistical Data in Education (3) An introduction to quantitative methods in educational research emphasizing the interpretation of frequently encountered statistical procedures.

Effective: Summer 2011

GAME 250 (CMPSC 208) (GQ)

Technical Game Development (3) Introduction to the tools and techniques required to implement games in a virtual environment.

Effective: Summer 2014

Prerequisite: MATH 021

GAME 251 (GQ)

2D Game Programming (3) Introduction to programming 2D Games with HTML5 and Javascript.

Effective: Spring 2015

Prerequisite: MATH 021

HM 350 (GQ)

Hospitality Decision Making and Information Systems (3) Application of decision theory and models to solve qualitative and quantitative problems using Hospitality Information Systems and Computer Applications.

Effective: Spring 2015

Prerequisite: A grade of "C" or better required for HM 271 STAT 200

MATH 017 (GQ)

Finite Mathematics (3) Introduction to logic, sets, probability.

Effective: Summer 1988

Prerequisite: 2 units of high school mathematics

MATH 018 (GQ)

Elementary Linear Algebra (3) Linear functions; systems of equations; matrices; linear programming.

Effective: Fall 1999

Prerequisite: 2 units of high school mathematics

MATH 021 (GQ)

College Algebra I (3) Quadratic equations; equations in quadratic form; word problems; graphing; algebraic fractions; negative and rational exponents; radicals.

Effective: Summer 2013

Prerequisite: MATH 004 or satisfactory performance on the mathematics placement examination

MATH 022 (GQ)

College Algebra II and Analytic Geometry (3) Relations, functions, graphs; polynomial, rational functions, graphs; word problems; nonlinear inequalities; inverse functions; exponential, logarithmic functions; conic sections; simultaneous equations.

Effective: Summer 2013

Prerequisite: MATH 021 or satisfactory performance on the mathematics placement examination

MATH 026 (GQ)

Plane Trigonometry (3) Trigonometric functions; solutions of triangles; trigonometric equations; identities.

Effective: Fall 2016

Prerequisite: MATH 021 or satisfactory performance on the mathematics placement examination

MATH 030 (GQ)

Problem Solving (3) Concepts in problem solving; reducing new problems to old ones; techniques for attacking problems; building mathematical models.

Effective: Spring 1994

MATH 033 (GQ)

Mathematics for Sustainability (3) Mathematical analysis of sustainability; measurement, rates of change, risk and probability, networks; examples.

Effective: Spring 2014

Prerequisite: one unit of algebra or MATH 004

MATH 034 (GQ)

The Mathematics of Money (3) Simple interest, simple discount, compound interest, annuities, investments, retirement plans, taxes, credit cards, and mortgages.

Effective: Summer 2009

Prerequisite: one unit of algebra or MATH 004

MATH 035 (GQ)

General View of Mathematics (3) Survey of mathematical thought in logic, geometry, combinatorics, and chance.

Effective: Summer 1992

MATH 036 (GQ)

Insights Into Mathematics (3) Examples of mathematical applications in many areas including voting theory, fair division, apportionment, and Euler and Hamilton circuits.

Effective: Fall 2008

Prerequisite: one unit of algebra or MATH 004

MATH 040 GQ covers all the topics in MATH 004, 021 GQ, 022 GQ, and 026 GQ in one semester, MATH 041 GQ covers the same topics in trigonometry and analytic geometry as MATH 040 GQ. These courses are designed to prepare students for MATH 140 GQ. Students are placed in the appropriate course depending upon the results of the mathematics placement examinations.

MATH 040 (GQ)

Algebra, Trigonometry, and Analytic Geometry (5) Concepts of algebra; equations; inequalities; functions; graphs; polynomial and rational functions; exponential and logarithmic functions; trigonometry; analytic geometry; complex numbers.

Effective: Summer 2013

Prerequisite: satisfactory performance on the mathematics placement examination

MATH 041 (GQ)

Trigonometry and Analytic Geometry (3-4) Straight lines; circles; functions and graphs; graphs of polynomial and rational functions; exponential and logarithmic functions; trigonometry; conic sections.

Effective: Summer 2013

Prerequisite: MATH 021 or satisfactory performance on the mathematics placement examination

MATH 081 (GQ)

Technical Mathematics I (3) Algebraic expressions, equations, systems of equations, trigonometric functions, graphs, solution of triangles, vectors.

Effective: Summer 2013

Prerequisite: MATH 004 or satisfactory performance on the mathematics placement examination

MATH 082 (GQ)

Technical Mathematics II (3) Exponents, radicals, complex numbers, theory of equations, inequalities, half angle and double angle formulas, inverse trigonometric functions, exponential, logarithm, conic sections.

Effective: Summer 1995

Prerequisite: MATH 081

MATH 083 (GQ)

Technical Calculus (4) Limits, derivatives of algebraic functions, implicit differentiation, related rates, applied extrema problems, curve sketching, integration, numerical integration, applications of integration, integration techniques, differential equations.

Effective: Summer 1995

Prerequisite: MATH 082

MATH 110 GQ and MATH 140 GQ, 141 GQ are two sequences that discuss differential and integral calculus. They differ in the areas where calculus is applied. The MATH 110 GQ, 111 GQ sequence includes applications from business: the engineering sciences. A student who wants to change from one sequence to another should consult with the chair of the mathematics department.

MATH 110 (GQ)

Techniques of Calculus I (4) Functions, graphs, derivatives, integrals, techniques of differentiation and integration, exponentials, improper integrals, applications. Students may take only one course for credit from MATH 110, 140, 140A, and 140B.

Effective: Fall 2016

Prerequisite: MATH 022 ; MATH 040 ; MATH 041 ; or satisfactory performance on the mathematics placement examination

MATH 111 (GQ)

Techniques of Calculus II (2) Analytic geometry, partial differentiation, maxima and minima, differential equations.

Effective: Summer 1988

Prerequisite: MATH 110

MATH 140 (GQ)

Calculus With Analytic Geometry I (4) Functions, limits; analytic geometry; derivatives, differentials, applications; integrals, applications. Students may only take one course for credit from MATH 110, 140, 140A, 140B, and 140H.

Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 ; MATH 026 and satisfactory performance on the mathematics placement examination ; MATH 040 or MATH 041 ; satisfactory performance on the mathematics placement

MATH 140A (GQ)

Calculus, Analytic Geometry, Algebra, and Trigonometry (6) Review of algebra and trigonometry; analytic geometry; functions; limits; derivatives, differentials, applications; integrals, applications. Students may take only one course for credit from MATH 110, 140, 140A, and 140B.

Effective: Summer 2013

Prerequisite: MATH 022 MATH 026 ; MATH 026 satisfactory performance on the mathematics placement examination ; MATH 040 ; MATH 041 ; satisfactory performance on the mathematics placement

MATH 140B (GQ)

Calculus and Biology I (4) Functions, limits, analytic geometry; derivatives, differentials, applications from biology; integrals, applications from biology. Students may take only one course for credit from MATH 110, 140, 140A, and 140B.

Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 ; MATH 026 Satisfactory performance on the mathematics placement examination ; MATH 040 ; MATH 141 ; satisfactory performance on the mathematics placement

MATH 140E (GQ)

Calculus with Engineering Applications I (4) Functions; limits; analytic geometry; derivatives; differentials, applications; integrals, applications.

Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 or MATH 040 or MATH 041 or satisfactory performance in the mathematics placement examination

MATH 140G (GQ)

Calculus with Earth and Mineral Sciences Applications I (4) Functions, limits, analytic geometry; derivatives, differentials, applications from the earth and mineral sciences; integrals, applications from the earth and mineral sciences. Students may only take one course for credit from MATH 110, 140, 140A, 140B, 140E, and 140G.

Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 or MATH 040 or MATH 041 or satisfactory performance on the mathematics placement examination

MATH 140H (GQ)

Honors Calculus with Analytic Geometry I (4) Honors course in functions, limits; analytic geometry; derivatives, differentials, applications; integrals, applications. Students may only take one course for credit from MATH 110, 140, 140A, 140B, and 140H.

Effective: Fall 2016

Prerequisite: MATH 022 MATH 026 or MATH 040 or MATH 041 or satisfactory performance on the mathematics placement examination

MATH 141 (GQ)

Calculus with Analytic Geometry II (4) Derivatives, integrals, applications; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141, 141B, and 141H.

Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 141B (GQ)

Calculus and Biology II (4) Derivatives, integrals, applications from biology; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141 and 141B.

Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 141E (GQ)

Calculus with Engineering Applications II (4) Integration, applications; sequences and series; parametric equations, application.

Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 141G (GQ)

Calculus with Earth and Mineral Sciences Applications II (4) Derivatives, integrals, applications from the earth and mineral sciences; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141, 141B, 141E, and 141G.

Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 141H (GQ)

Honors Calculus with Analytic Geometry II (4) Honors course in derivatives, integrals, applications; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141, 141B, and 141H.

Effective: Fall 2016

Prerequisite: MATH 140 ; MATH 140A ; MATH 140B ; MATH 140E ; MATH 140G ; MATH 140H

MATH 200 (GQ)

Problem Solving in Mathematics (3) Fundamental concepts of arithmetic and geometry, including problem solving, number systems, and elementary number theory. For elementary and special education teacher certification candidates only. A student who has passed EDMTH 444 may not take MATH 200 for credit.

Effective: Summer 2009

MATH 201 (GQ)

Problem Solving in Mathematics II (3) A continuation of MATH 200, this course studies the foundations of elementary school mathematics with an emphasis on problem solving.

Effective: Spring 2012

Prerequisite: completion of MATH 200 is suggested

MATH 210 (GQ)

Calculus with Engineering Technology Applications (3) Topics in calculus with an emphasis on applications in engineering technology.

Effective: Spring 2013

Prerequisite: trigonometry and an introductory course in calculus

MATH 211 (GQ)

Intermediate Calculus and Differential Equations with Applications (3) Topics in ordinary differential equations, linear algebra, complex numbers, Eigenvalue solutions and Laplace transform methods.

Effective: Spring 2013

Prerequisite: MATH 210

MATH 220 (GQ)

Matrices (2-3) Systems of linear equations; matrix algebra; eigenvalues and eigenvectors; linear systems of differential equations.

Effective: Spring 2009

Prerequisite: MATH 110 MATH 140 or MATH 140H

MATH 220H (GQ)

Honors Matrices (2-3) Honors course in systems of linear equations; matrix algebra; eigenvalues and eigenvectors; linear systems of differential equations.

Effective: Spring 2009

Prerequisite: MATH 110 MATH 140 or MATH 140H

PHIL 012 (GQ)

Symbolic Logic (3) Formal logical structures of propositions and arguments; mechanical tests and proof techniques for logically necessary truth and deductive validity.

Effective: Fall 1998

PSYCH 200 (GQ)

Elementary Statistics in Psychology (4) Frequency distributions and graphs; measures of central tendency and variability; normal probability curve; elementary sampling and reliability; correlations; simple regression equations.

Effective: Spring 2011

Prerequisite: PSYCH 100 ; MATH 021

SCM 200 (GQ)

Introduction to Statistics for Business (4) Topics include descriptive statistics, probability distributions, statistical inference, regression and correlation, and forecasting.

Effective: Summer 2013

Prerequisite: MATH 021 or higher or satisfactory score on the mathematics placement examination

SCM 200H (GQ)

Honors Introduction to Statistics for Business (4) Topics include descriptive statistics, probability distributions, statistical inference, regression and correlation, and forecasting.

Effective: Summer 2013

Prerequisite: MATH 021 or higher or satisfactory score on the mathematics placement examination

STAT 100 (GQ)

Statistical Concepts and Reasoning (3) Introduction to the art and science of decision making in the presence of uncertainty.

Effective: Summer 1988

STAT 200 (GQ)

Elementary Statistics (4) Descriptive statistics, frequency distributions, probability, binomial and normal distributions, statistical inference, linear regression, and correlation.

Effective: Fall 2014

Prerequisite: Placement into MATH 021 or higher

STAT 240 (GQ)

Introduction to Biometry (3) Statistical analysis, sampling, and experimentation in the agricultural sciences; data collection, descriptive statistics, statistical inference, regression, one factor AOV, probability. Students may take only one course from STAT 200, 220, 240, 250 for credit.

Effective: Fall 2014

Prerequisite: Placement into MATH 021 or higher

STAT 250 (GQ)

Introduction to Biostatistics (3) Statistical analysis and interpretation of data in the biological sciences; probability; distributions; statistical inference for one- and two-sample problems.

Effective: Fall 2014

Prerequisite: Placement into MATH 021 or higher

STAT 301 (GQ)

Statistical Analysis I (3) Probability concepts; nature of statistical methods; elementary distribution and sampling theory; fundamental ideas relative to estimation and testing hypotheses.

Effective: Summer 1988

Prerequisite: 3 credits of calculus

Associate Degree Programs

Majors that lead to two-year associate degrees are available at most of Penn State's undergraduate locations. These majors provide concentrated instruction to prepare graduates for specialized occupational assignments, except for the Letters, Arts, and Sciences major, which provides graduates with a general education and some specialization in their fields of interest.

More than twenty associate degree majors lead to either the Associate in Arts degree, the Associate in Engineering Technology degree, or the Associate in Science degree.

In addition, check out Penn State's World Campus for available two-year degrees at www.worldcampus.psu.edu.

Concurrent and Sequential Majors Programs--At the baccalaureate or associate degree level, students may be approved for admission to more than one major under the Concurrent Majors program. A Concurrent Majors program is one in which students take courses to concurrently meet the requirements of at least two majors, with graduation for all majors in the program occurring during the same semester. Concurrent majors must all be at the baccalaureate or associate degree level. Under the Sequential Majors program, upon graduation from an associate or baccalaureate degree program, a student may apply for re-enrollment in another undergraduate degree program.



Business Administration

Abington College (2BAAB)

Altoona College (2BAAL)

Berks College (2BABL)

Capital College (2BACA)

University College (2BACC): Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State

Mont Alto, Penn State New Kensington, Penn State Lehigh Valley, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State

Worthington Scranton, Penn State York

University College (2BACC): Via World Campus

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

The associate degree program in Business Administration provides an introductory foundation to core aspects of the business environment that prepares graduates for future baccalaureate study in business or for direct entry into the work place. The primary objective of this major is to provide a business-oriented program with sufficient communicative and mathematical skills, socially relevant course work, and specific business specialties to develop a well-rounded and knowledgeable graduate.

Students should work closely with academic advisers to schedule course work required to transition to baccalaureate business programs.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Business Administration, a minimum of 60 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(9 credits of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 48-50 credits

(This includes 3 credits of GQ General Education courses and 6 credits of GWS General Education courses.)

PRESCRIBED COURSES (13 credits)

CAS 100 GWS(3) (Sem: 2-4)

ACCTG 211(4), ENGL 202D GWS(3) [\[1\]](#), MIS 204(3) (Sem: 2-4)

ADDITIONAL COURSES (23-24 credits)

ENGL 15 GWS(3) [\[1\]](#) or ENGL 30 GWS(3) [\[1\]](#) (Sem: 1-2)

MATH 21 GQ(3), MATH 22 GQ(3), or MATH 110 GQ(4) (Sem: 1-2)

BA 243(4) or BA 241(2) and BA 242(2) (Sem: 1-4)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-4)

MGMT 301(3) [\[1\]](#) or MGMT 301W(3) [\[1\]](#) (Sem: 3-4)

MKTG 301(3) [\[1\]](#) or MKTG 301W(3) [\[1\]](#) (Sem: 3-4)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (12-13)

Select 12-13 credits from: BA 100(3); BA 250(3); BA 364(3); CAS 250(3) or CAS 252(3); CAS 352(3); MATH 22 GQ(3); MATH 110 GQ(4); ACCTG 300 to 399(3); ECON 100 to ECON 399(3); ENTR 100 to 399(3); FIN 100 to 399(3); HPA 100 to 399(3); IB 303 IL(3); LER 100 to 399(3); MGMT 100 to 399(3); MKTG 100 to 399(3); MIS 100 to 399(3); RM 100 to 399(3); or SCM 200 to 399(3) (Sem: 1-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-001

Review Date: 1/10/17

UCA Revision #1: 8/9/06

UCA Revision #2: 7/26/07

UC

Biomedical Engineering Technology

University College: Penn State New Kensington (2 BET)

PROFESSOR JOIE MARHEFKA, Program Coordinator, Penn State New Kensington

PROFESSOR IVAN E. ESPARRAGOZA, Director of Engineering Technology and Commonwealth Engineering, Penn State Brandywine

PROFESSOR SVEN BILÉN, Head, School of Engineering Design, Technology, and Professional Programs, Penn State University Park

The medical community has grown to depend on medical devices and systems to diagnose, treat and monitor patients in health care. These medical devices have become very complex systems, as they are becoming microprocessor controlled, PC based, and networked to share information. Biomedical Equipment Technicians (BETs) are specialized individuals who are educated and trained on the methods of: physiological measurement; equipment application and operation; safety, performance and preventive maintenance testing; calibration; problem solving; and troubleshooting. In addition, BETs may be involved in equipment and technology management programs, selection and installation of medical equipment, manufacturer and FDA recalls of medical devices, quality improvement programs, and training programs for hospital personnel in the safe and proper use of medical equipment. The classroom and laboratory portions of this major focus on electronically and PC based medical devices for patient monitoring and life-support equipment. The student is exposed to a much broader spectrum of medical equipment through a 400-hour (ten-week) practical internship in an approved health care facility.

Program Educational Objectives

The BET major prepares graduates who, during the first few years of professional practice, will be able to:

1. Apply knowledge of medical devices to install, perform acceptance testing and preventive maintenance (PMs) inspections, troubleshoot, and repair a wide variety of medical devices.
2. Be employed in the healthcare technology management (HTM) profession, and advance their careers by engaging in continuous learning through CBET certification and/or other professional training programs and independent study.
3. Identify and apply standards, regulations, and quality improvement plans regarding medical equipment.
4. Work both independently and collaboratively in multi-disciplinary teams, communicating effectively with relevant healthcare related professionals.

Program Outcomes (Student Outcomes)

The BET program outcomes are as follows:

1. Understand use, application, operation, installation, acceptance testing, preventive maintenance, performance assurance and safety inspections (PMs) on select medical devices.
2. Understand and apply a fundamental knowledge of electrical and electronic engineering technology fundamentals, components, circuits and networking fundamentals.
3. Apply basic mathematical and scientific principles to identify, analyze and solve technical problems.
4. Be aware of and understand diversity, professional and ethical responsibilities, applicable standards and regulations regarding medical equipment support.
5. Work with fellow technicians, clinical professionals and other related professionals by functioning effectively on teams and by independent work.
6. Communicate effectively with fellow technicians, clinical professionals and other related professionals.
7. Recognize and understand the need for continued professional development, including formal and informal study.
8. Recognize, observe and participate when possible in quality improvement programs, timeliness and commitment to continuous improvement that support medical equipment and systems.

Students completing the 2 BET degree need only complete several additional courses to obtain the Associate in Engineering Technology degree in Electrical Engineering Technology. Graduates of the program may qualify for admission to the baccalaureate degree major in Electrical Engineering Technology offered at Penn State Harrisburg, Electrical and Computer Engineering Technology offered at Penn State Erie, and Electro-Mechanical Engineering Technology offered at Penn State Altoona, Berks, New Kensington and York.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Engineering Technology degree in Biomedical Engineering Technology, a minimum of 71 credits is required. This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR) (See description of General Education in front of *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 62-63 credits

(This includes 12 credits of General Education courses: 3 credits of GN courses; 3 credits of GQ courses; 6 credits of GWS courses.)

PRESCRIBED COURSES (47 credits)

BE_T 101(1), CHEM 101 GN(3), EET 105(3), CMPET 117(3), CMPET 120(1), ENGL 015 GWS(3), IST 110 GS(3)[1], IST 220(3) (Sem: 1-2)

BE_T 201(5)[1], BE_T 204(5)[1], BE_T 205(4)[1], CAS 100 GWS(3), PHYS 150 GN(3), RADSC 230(3) (Sem: 3-4)

BE_T 203 (4)[1][2] (Sem: 5)

ADDITIONAL COURSES (15-16 credits)

MATH 22 GQ(3) and MATH 26 GQ(3) or MATH 40 GQ(5) (Sem: 1-2)

BE_T 202(4)[1] or BE_T 206(4)[1] (Sem: 3-4)

BISC 4 GN(3) or BIOL 141 GN(3) (Sem: 3-4)

Select 3 credits from the following technical courses: BE_T 210(3), BE_T 296(1-18), BE_T 297(1-9), BIOL 129 GN(4), CMPET 211(3), CMPSC 101 GQ(3), EDSGN 100(3), EET 213(5), EET 297(1-3), EGT 201(2) or MCHT 111(3) (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] BE T 203(4) Internship must be the last course taken for the degree.

Last Revised by the Department: Summer Semester 2017

Blue Sheet Item #: 45-04-048A

Review Date: 01/10/2017

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

[Comments](#)

EN

Criminal Justice

*Altoona College (2 CJ)
University College: Penn State Greater Allegheny*

PROFESSOR Peter M. Hopsicker, Division Head, Division of Education, Human Development, and Social Sciences

Students receiving an associate degree in criminal justice should understand each of the three main components of the criminal justice system and their interrelationships. This program includes study in law enforcement, courts, and corrections individually and as components of a system, plus work in theories of crime causation, and crime control policy. Students should expect reading, writing, and critical thinking skills to be rigorously applied and developed throughout the degree program. The Associate in Science degree in Criminal Justice prepares students for entry-level positions in criminal justice or for study at the baccalaureate level.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science in Criminal Justice, a minimum of 64 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits
(12 of these credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

ELECTIVES: 26 credits

REQUIREMENTS FOR THE MAJOR: 29 credits [\[1\]](#)
(This includes 12 credits of General Education courses: 3 credits of GH courses; 3 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (26 credits)
CRIMJ 100(3), PHIL 103 GH(3), SOC 012 GS(3), SOC 119 GS;US(4) (Sem: 1-4)
CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3), STAT 200 GQ(4) (Sem: 3-4)

ADDITIONAL COURSES (3 credits) [\[1\]](#)
CRIMJ 250(3); SOC 207(3)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-013A

Review Date: 1/10/17

UCA Revision #1: 8/3/06
UCA Revision #2: 7/27/07

AL

Electrical Engineering Technology

Penn State Erie, The Behrend College
University College: Penn State Fayette, Penn State York (2 EET)

PROFESSOR DAVID LOKER, *Program Coordinator, Penn State Erie, The Behrend College*
 PROFESSOR ANDRZEJ GAPIŃSKI, *Program Coordinator, Penn State Fayette*
 PROFESSOR MICHAEL MARCUS, *Program Coordinator, Penn State York*
 PROFESSOR IVAN E. ESPARRAGOZA, *Director of Engineering Technology and Commonwealth Engineering, Penn State Brandywine*
 PROFESSOR SVEN BILÉN, *Head, School of Engineering Design, Technology, and Professional Programs, Penn State University Park*

The Electrical Engineering Technology (2 EET) major helps prepare graduates for technical positions in the expanding fields of electronics, computers and microprocessors, instrumentation, and electrical equipment. The primary objective is to provide a broad foundation of theoretical and practical knowledge in the areas of electrical and electronic circuits, digital circuits, computers, electrical machinery, and programmable logic controls.

Program Educational Objectives

To produce graduates who, during the first few years of professional practice, will:

1. Demonstrate broad knowledge of electrical/electronics engineering technology practices to support design, application, installation, manufacturing, operation, and maintenance as required by their employer,
2. Apply basic mathematical and scientific principles for technical problem solving in areas which may include circuit analysis of both analog and digital electronics, microprocessors, programmable logic control, and electrical machines,
3. Utilize computers and software in a technical environment,
4. Demonstrate competence in written and oral communication,
5. Work effectively as an individual and as a member of a multidisciplinary team,
6. Show awareness of social concerns and ethical/professional responsibilities in the workplace, and
7. Matriculate into a baccalaureate degree and/or continue their professional training and adapt to changes in the workplace, through additional formal or informal education.

Program Outcomes (Student Outcomes)

Students should possess

- a) an ability to apply the knowledge, techniques, skills and modern tools of the disciplines to electrical engineering technology activities,
- b) an ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge,
- c) an ability to conduct standard tests and measurements, and to conduct, analyze and interpret experiments,
- d) an ability to function effectively as a member of a technical team,
- e) an ability to identify, analyze and solve narrowly defined engineering technology problems,
- f) an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature,
- g) an understanding of the need for and an ability to engage in self-directed continued professional development, including engineering standards,
- h) an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity,
- i) a commitment to quality, timeliness and continuous improvement.

In addition, 2EET graduates must demonstrate knowledge and hands-on competence appropriate to the objectives of the program in:

A. the application of circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcomputers, and engineering standards to the building, testing, operation, and maintenance of electrical/electronic(s) systems; and

B. the application of natural sciences and mathematics at or above the level of algebra and trigonometry to the building, testing, operation, and maintenance of electrical/electronic systems.

Graduates of the Electrical Engineering Technology major may qualify for admission to the baccalaureate degree majors in Electrical Engineering Technology offered at Penn State Harrisburg, Capital College; the baccalaureate degree major in Electrical and Computer Engineering Technology at Penn State Erie, The Behrend College; or the baccalaureate degree major in Electro-Mechanical Engineering Technology offered at Penn State Altoona, Penn State Berks, Penn State New Kensington or Penn State York. Two baccalaureate tracks are available to streamline the transition to these degree programs. Students interested in pursuing the baccalaureate degree major of Electrical Engineering Technology at Penn State Harrisburg should follow track c. A general track is also provided for students who decide not to continue their engineering technology education at the baccalaureate level.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Engineering Technology degree in Electrical Engineering Technology, a minimum of 66 credits is required. This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(12-15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See General Education description in front of *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 57-62 credits

(This includes 12-15 credits of General Education courses: 3 credits of GN courses; 3 credits of GQ courses; 6 credits of GWS courses, 0-3 credits of GH or GS)

PRESCRIBED COURSES (23 credits)

CMPET 117(3) [\[11\]](#), CMPET 120(1) [\[11\]](#) (Sem: 1-2)

CAS 100 GWS(3), CMPET 211(3), EE_T 114(4) [\[11\]](#), EE_T 118(1) [\[11\]](#), EET 212(4), EET 214(3), EET 215(1) (Sem: 3-4)

ADDITIONAL COURSES (34-39 credits)

ENGL 015 GWS(3); ENGL 030 GWS(3) (Sem: 1-2)

MATH 022 GQ(3)[2] and MATH 026 GQ(3)[2]; or MATH 040 GQ(5)[2]; or MATH 081 GQ(3)[2] and MATH 082 GQ(3)[2] (Sem: 1-2)

PHYS 150 GN(3); PHYS 211 GN(4); PHYS 250 GN(4) (Sem: 3-4)

Select at least 22-26 credits from one of the following three tracks: a. General Track, b. Baccalaureate Electrical and Computer Engineering Technology (ECET) Track or c. Baccalaureate Electro-Mechanical Engineering Technology (EMET) Track.

a. General Track:

(This includes 3 credits of General Education courses: 3 credits of GH or GS)

EDSGN 100(3); EET 105(3), IET 101(3), MCHT 111(3) (Sem: 1-2)

EET 275(3); EMET 230(3) (Sem: 3-4)

PHYS 151 GN(3); PHYS 212 GN(4); PHYS 251 GN(4); CHEM 110 GN(3), CHEM 111 GN(1) (Sem: 3-4)

STS 200 GS(3); STS 233/PHIL 233 GH(3); STS 245 GS; IL(3) (Sem: 3-4)

Select 3-4 credits in consultation with your adviser from the approved program list. (Sem: 3-4)

b. Baccalaureate Electrical and Computer Engineering Technology (ECET) Track:

CMPET 005(1), EET 002(1), EET 101(3), EET 109(1) (Sem: 1-2)

CHEM 110 GN(3), CHEM 111 GN(1), EET 275(3), EGT 119(2) (Sem: 3-4)

MATH 083 GQ(4) or MATH 140 GQ(4) (Sem: 3-4)

Select 3 credits of General Education natural science GN or MATH 210 GQ(3) (Sem: 3-4)

c. Baccalaureate Electro-Mechanical Engineering Technology (EMET) Track [3]:

((This includes 3 credits of General Education courses: 3 credits of GH or GS)

EDSGN 100(3); EET 105(3), IET 101(3), MCHT 111(3) (Sem: 1-2)

EET 275(3); EMET 230(3) (Sem: 3-4)

MATH 083 GQ(4) or MATH 140 GQ(4) (Sem: 3-4)

PHYS 151 GN(3); PHYS 212 GN(4); PHYS 251 GN(4); CHEM 110 GN(3), CHEM 111 GN(1) (Sem: 3-4)

STS 200 GS(3); STS 233/PHIL 233 GH(3); STS 245 GS;IL(3) (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] A student planning to re-enroll into the baccalaureate degree major of Electro-Mechanical Engineering Technology (EMET), after graduation from the 2 EET program, must receive a grade of C or better in order to meet requirements of the EMET degree.

[3] A student planning to re-enroll into the baccalaureate degree major of Electrical Engineering Technology at Penn State Harrisburg, after graduation from the 2 EET program, should follow Track c. They should select MATH 140 GQ(4) instead of MATH 083 GQ(4).

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-048B

Review Date: 1/10/2017

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

[Comments](#)

EN

Forest Technology

University College: Penn State Mont Alto
University Park, College of Agricultural Sciences (2 FORT)

PROFESSOR CRAIG T. HOUGHTON, *in charge*

The objectives of the major are to train forestry field personnel in the technical aspects of evaluating, managing, and protecting forest resources. Laboratories held in the Michaux State Forest, adjacent to Penn State Mont Alto, stress field applications of classroom theory. Written and oral communication skills are stressed in all courses. Graduates of the program are employed by private businesses including forestry consulting firms, sawmills, and other wood products manufacturers; public agencies including federal, state, and municipal forest resource management and recreation programs; urban tree service companies, pulp and paper manufacturers, surveying firms and landscaping firms, utility companies, and other businesses requiring personnel skilled in field inventory procedures, analysis, and presentation.

Some graduates transfer their credits to bachelor's degree programs such as forest ecosystem management, wildlife and fisheries science, recreation park and tourism management, biorenewable systems, environmental resource management, plant sciences, biology, and business management.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Forest Technology, a minimum of 64 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits
(15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 58 credits

PRESCRIBED COURSES (49 credits)

ENGL 015 GWS(3), FORT 100(1), FORT 105(3)[\[1\]](#), FORT 150(3)[\[1\]](#), GEOG 160 GS(3), GEOG 161(1), MATH 021 GQ(3) (Sem: 1)
BIOL 127 GN(3), FORT 110(3)[\[1\]](#), FORT 140(3), FORT 160(3)[\[1\]](#) (Sem: 2)
FORT 170(3), FORT 175(1) (Sem: Summer)
FORT 200(1), FORT 220(4), FORT 230(2)(Sem: 3)
CAS 100 GWS(3), FORT 240(3), FORT 250(3) (Sem: 4)

ADDITIONAL COURSES (9 credits)

Select 3 credits from MGMT 100W(3) or MGMT 301W(3) (Sem 3-4)
Select 6 credits from FORT 210(3), FORT 260(3), WILDL 101(3), or WILDL 207(3) (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-004A

Review Date: 1/10/17

UCA Revision #1: 8/4/06

AG

General Business

Penn State Erie, The Behrend College (2GBBC)

PROFESSOR JOHN M. MAGENAU III, *Director, School of Business, Behrend College*

The associate degree major in General Business offers an introduction to several aspects of business. In addition, it provides a foundation that allows those students who qualify for admission to baccalaureate degree programs in business to make a smooth transition into four-year business majors offered at Penn State Erie, The Behrend College. The business coursework required by the major introduces students to basics of accounting, economics, management information systems, quantitative business analysis, business law, the social and ethical environment of business, finance, management, marketing, and supply chain management. To complete the major, students have the option of earning a certificate in Oracle or SAP, Enterprise Resource Planning (ERP) or Financial Planning. The general education and other requirements of the major provide an opportunity for students to strengthen their skills in oral and written communication and quantitative reasoning which are essential for success in business careers.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in General Business, a minimum of 61 credits is required.

Recommended Scheduling by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits
(12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
See description of General Education in this bulletin.)

FIRST YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in GENERAL EDUCATION course selections or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 Credit

REQUIREMENTS FOR THE MAJOR: 51-52 credits
(This includes 12 credits of General Education courses: 6 credits of GWS courses; 3 credits of GQ courses; 3 credits of GS courses.)

PRESCRIBED COURSES (34 credits)
ENGL 015 GWS(3), CAS 100 GWS(3) (Sem: 1-2)
ACCTG 211(4)[\[1\]](#), ECON 102 GS(3), ECON 104 GS(3), ENGL 202D GWS(3), MIS 204(3)[\[1\]](#) (Sem: 2-3)
FIN 301(3)[\[1\]](#), MGMT 301(3)[\[1\]](#), MKTG 301(3)[\[1\]](#), SCM 301(3)[\[1\]](#) (Sem: 3-4)

ADDITIONAL COURSES (11-12 credits)
MATH 021 GQ(3), MATH 022 GQ(3), or MATH 110 GQ(4) (Sem: 1-2)
SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 2-3)
BA 243(4) or BA 241(2) and BA 242(2) (Sem: 2-4)

SUPPORTING COURSES AND RELATED AREAS (6 credits)
Select 6 credits from one of the following supporting course areas: General Education, Financial Planning[\[1\]](#), Oracle Business Suite Certificate[\[1\]](#), and SAP Certificate[\[1\]](#), or other 300-or 400-level business courses[\[1\]](#) in consultation with a faculty advisor (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-035A

Review Date: 1/10/2017

UCA Revision #1: 8/8/06

BD

Information Sciences and Technology

Berks College (2ISBL)

Continuing Education, University Park (2 IST)

University College: Penn State DuBois, Penn State Great Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York (2ISCC)
World Campus

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR MARY BETH ROSSON, *Associate Dean for Graduate and Undergraduate Studies*

This associate degree major is structured to prepare graduates for immediate and continuing employment opportunities in the broad disciplines of information science and technology. This includes positions such as application programmers, associate systems designers, network managers, Web designers and administrators, or information systems support specialists. Specifically, the major is designed to ensure a thorough knowledge of information systems and includes extensive practice using contemporary technologies in the creation, organization, storage, analysis, evaluation, communication, and transmission of information. The major fosters communications, interpersonal, and group interaction skills through appropriate collaborative and active learning projects and experiences. Technical material covers the structure of database systems, Web and multi-media systems, and considerations in the design of information systems. Team projects in most courses, a required internship, and a second-year capstone experience provide additional, focused venues for involving students in the cutting-edge issues and technologies in the field.

The Associate of Science in IST degree will be offered at multiple campuses within the Penn State system of colleges and campuses. Note that not all options will be available at all locations.

Baccalaureate Option: This option provides maximum articulation with the baccalaureate degree. Students who complete this option will meet all lower division requirements for the baccalaureate degree. This is not the case with the remaining options, although the degree of articulation is quite high for all associate degree options.

Generalized Business Option: This option enables students to specialize in the general business areas of accounting, marketing, and management.

Individualized Option: This option enables students to work closely with an adviser to develop a plan of study that meets the dual objectives of allowing a flexible academic program and providing breadth of technical specialization. An example would be a program where a student would take some of the courses listed in the Web Administration option and the remainder in the Software option.

Software Option: This option prepares graduates for entry-level programming support positions in industry. Students take courses in Web programming, database programming, and other contemporary programming environments.

Networking Option: This option prepares graduates for positions as entry-level computer network administrators. Students take courses in personal computer hardware, networking essentials, and network administration.

Telecommunications Option: This option prepares graduates for entry-level positions in the telecommunications industry. Students take courses in voice and data communications, protocols, networks, and wireless systems.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in IST, a minimum of 60 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(9-12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See the description of General Education in this bulletin.)

ELECTIVES: 4-7 credits

REQUIREMENTS FOR THE MAJOR: 44-46 credits

(This includes 9-12 credits of General Education courses, i.e., ALL options: 3 credits of GQ courses; 6 credits of GWS courses. The Baccalaureate Option also includes 3 credits of GS courses to equal a total of 12 credits that double count; the General Business Option also includes 0-3 credits of GS courses to equal 9-12 credits that double count.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 29 credits

PRESCRIBED COURSES (25 credits)

CMPSC 101 GQ(3) [\[1\]](#) (Sem: 1-2)

CAS 100B GWS(3), IST 110 GS(3) [\[1\]](#), IST 111S(1) [\[1\]](#), IST 210(3) [\[1\]](#), IST 220(3) [\[1\]](#), IST 250(3) [\[1\]](#), ENGL 015 GWS(3) (Sem: 1-2)

IST 260(3) [\[1\]](#) (Sem: 3-4)

ADDITIONAL COURSES (4 credits)

ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 3-4)

IST 295A(1) [\[1\]](#) or IST 295B(1) [\[1\]](#) (Sem: 3-4)

REQUIREMENTS FOR THE OPTION: 15-17 credits

BACCALAUREATE OPTION: (17 credits)

PRESCRIBED COURSES (13 credits)

IST 230(3) [\[1\]](#) and IST 240(3) [\[1\]](#) (Sem: 3-4)

ECON 102 GS(3) (Sem: 3-4)

STAT 200 GQ(4) (Sem: 3-4)

ADDITIONAL COURSES (4 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)

GENERALIZED BUSINESS OPTION: (15-16 credits)

ADDITIONAL COURSES (15-16 credits)

Select 15 credits in consultation with the adviser from the following list: (Sem:1-4)

ACCTG 151(3), ACCTG 152(3), ACCTG 211(4), BA 250(3), MKTG 220(3), MKTG 221(3), MKTG 310(3), MKTG 327(3), MGMT 100(3), MGMT 150(3), MGMT

321(3), MGMT 341(3)

ECON 102 GS(3), ECON 104 GS(3), or ECON 014 GS(3)

MATH 017 GQ(3), MATH 021 GQ(3), MATH 022 GQ(3), or MATH 026 GQ(3)

INDIVIDUALIZED OPTION: (15 credits)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits in consultation with an adviser that follow a coherent theme in information sciences and technology with a grade of C or better required for all IST [\[1\]](#) courses. (Sem: 1-4)

SOFTWARE OPTION: (15 credits)

PRESCRIBED COURSES (12 credits)

CMPSC 302(3) (Sem: 2-4)

IST 211(3) [\[1\]](#), IST 247(3) [\[1\]](#), and IST 256(3) [\[1\]](#) (Sem: 3-4)

ADDITIONAL COURSES (3 credits)
MATH 017 GQ(3), MATH 021 GQ(3), MATH 022 GQ(3), or MATH 026 GQ(3) (Sem: 1-2)

NETWORKING OPTION: (15 credits)

PRESCRIBED COURSES (12 credits)
IST 225(3)[\[1\]](#), IST 226(3)[\[1\]](#), IST 227(3)[\[1\]](#), and IST 228(3)[\[1\]](#) (Sem: 3-4)

ADDITIONAL COURSES (3 credits)
MATH 017 GQ(3), MATH 021 GQ(3), MATH 022 GQ(3), or MATH 026 GQ(3) (Sem: 1-2)

TELECOMMUNICATIONS OPTION: (15 credits)

PRESCRIBED COURSES (12 credits)
IST 221(3)[\[1\]](#), IST 222(3)[\[1\]](#), IST 223(3)[\[1\]](#), and IST 224(3)[\[1\]](#) (Sem: 3-4)

ADDITIONAL COURSES (3 credits)
MATH 017 GQ(3), MATH 021 GQ(3), MATH 022 GQ(3), or MATH 026 GQ(3) (Sem: 1-2)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-069A

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UCA Revision #2: 7/27/07

IS

Letters, Arts, and Sciences

Abington College (2LAAB)

Altoona College (2LAAL)

Penn State Erie, The Behrend College (2LABC)

Berks College (2LABL)

Penn State Harrisburg (2LACA)

University College (2LACC): Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Hazleton, Penn State Mont Alto, Penn State New

Kensington, Penn State Schuylkill, Penn State Shenango Valley, Penn State Wilkes-Barre, Penn State Worthington-Scranton

University Park, College of the Liberal Arts (2 LAS)

World Campus

The objectives of the Letters, Arts, and Sciences major are to broaden the student's understanding, interests, and skills; to help the student become a more responsible, productive member of the family and community; and to offer a degree program with sufficient electives to permit some specialization according to the student's interests or career plans. Letters, Arts, and Sciences is a complete two-year degree major. However, graduates who later seek admission to baccalaureate degree majors may apply baccalaureate credits toward the new degree.

In addition to a wide variety of baccalaureate majors offered at University Park campus, graduates of the Letters, Arts, and Sciences major may qualify for admission to the baccalaureate degree majors in Behavioral Sciences, Elementary Education, Humanities, or Public Policy offered at Penn State Harrisburg. Or they may qualify for any of a large number of baccalaureate degree majors offered by Penn State Erie, The Behrend College, in business, the liberal arts, and sciences.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Arts degree in Letters, Arts, and Sciences, a minimum of 60 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(6 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

ELECTIVES: 15 credits

REQUIREMENTS FOR THE MAJOR: 30 credits#[\[1\]](#)

(This includes 6 credits of General Education GWS courses.)

PRESCRIBED COURSES (6 credits)

ENGL 015 GWS(3) (Sem: 1-2)

CAS 100 GWS(3) (Sem: 3-4)

ADDITIONAL COURSES (3 credits)

ENGL 202A GWS(3), ENGL 202B GWS(3), ENGL 202C GWS(3), or ENGL 202D GWS(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 3 credits in any course designated as arts* (Sem: 1-4)

Select 3 credits in any course designated as humanities* (Sem: 1-4)

Select 3 credits in any course designated as social and behavioral sciences* (Sem: 1-4)

Select 3 credits in any course designated as physical, biological, or earth sciences* (Sem: 1-4)

Select 9 credits in any one of the following areas*: arts, humanities, social and behavioral sciences, natural sciences and quantification, and foreign language skills. (If foreign language courses are chosen, it is recommended that these courses be in one foreign language sequence.) (Sem: 1-4)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

#The required credits of General Education and Requirements for the Major must be baccalaureate-level courses. For students intending to seek admission to a baccalaureate program upon graduation, it is recommended that most, if not all, of the courses be at the baccalaureate level. For those students who will seek a bachelor of arts degree upon graduation from Letters, Arts, and Sciences, it is strongly recommended that a foreign language be taken since admission to a bachelor of arts program in the College of the Liberal Arts requires one college-level course, or the equivalent, in a foreign language.

*Courses that will satisfy the arts, humanities, social and behavioral sciences, natural sciences, and quantification requirements are defined on the Letters, Arts, and Sciences checklist, which may be obtained from the College of the Liberal Arts associate dean for undergraduate studies at the University Park campus or from any Letters, Arts, and Sciences representative at other locations.

Last Revised by the Department: Spring Session 2017

Blue Sheet Item #: 45-04-071B

Review Date: 1/10/17

Reviewed by Publications: 06/23/06

LA

Mechanical Engineering Technology

*Penn State Erie, The Behrend College
University College: Penn State DuBois, Penn State York (2 MET)*

PROFESSOR SVEN BILÉN, *Head, School of Engineering Design, Technology, and Professional Programs, Penn State University Park*
PROFESSOR IVAN ESPARRAGOZA, *Director of Engineering Technology and Commonwealth Engineering, Penn State University Park*
PROFESSOR FREDRICK NITTERRIGHT, *Program Coordinator, Penn State Erie, The Behrend College*
PROFESSOR DOUGLAS MILLER, *Program Coordinator, Penn State DuBois*
PROFESSOR MARSHALL COYLE, *Program Coordinator, Penn State York*

This major helps graduates prepare for technical positions in manufacturing, machine and tool design, computer drafting and design, computer integrated manufacturing, materials selection and processes, technical sales, and other related industries in mechanical applications. The primary objective of the program is to provide a broad foundation in mechanical systems and applications; computer systems in drafting (CAD), manufacturing (CAM), and automation and robotics (CIM); production and product design; mechanics, dynamics, and strength of materials.

PROGRAM EDUCATIONAL OBJECTIVES

Graduates of the Associate Degree in Mechanical Engineering Technology program will:

- Practice in the areas of applied design, manufacturing, testing, evaluation, technical sales, or 2D and 3D modeling.
- Communicate effectively and work collaboratively in multi-disciplinary teams.
- Learn and adapt to changes in a professional work environment.
- Demonstrate a high standard of professional ethics and be cognizant of social concerns as they relate to the practice of engineering technology.

STUDENT OUTCOMES

To support the achievement of educational objectives, the following student outcomes were established for the 2MET program. Students graduating from the 2MET program will:

1. Be able to apply the knowledge, techniques, skills, and modern tools of mechanical engineering technology to narrowly defined mechanical engineering technology activities.
2. Be able to apply a knowledge of mathematics, science, engineering and technology to mechanical engineering technology problems that require limited application of principles but extensive practical knowledge.
3. Be able to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments.
4. Be able to function effectively as a member of a technical team.
5. Be able to identify, analyze, and solve narrowly defined engineering technology problems.
6. Be able to communicate effectively regarding narrowly defined mechanical engineering technology activities.
7. Be able to recognize the need for and an ability to engage in self-directed continuing professional development.
8. Demonstrate an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
9. Demonstrate a commitment to quality, timeliness, and continuous improvement.

Additional Program Specific criteria for 2MET

A. The application of applied mechanics, computer-aided drafting/design, experimental techniques/procedures to the fabrication, test, operation, or documentation of basic mechanical systems

B. The application of physics or chemistry to mechanical systems in a rigorous mathematical environment at or above the level of algebra and trigonometry.

Graduates of this major may qualify for admission to the baccalaureate degree majors in Mechanical Engineering Technology and Structural Design and Construction Engineering Technology programs at Penn State Harrisburg; the Mechanical Engineering Technology and the Plastics Engineering Technology programs at Penn State Erie, The Behrend College; or the baccalaureate degree major in Electro-Mechanical Engineering Technology offered at Penn State Altoona, Penn State Berks, Penn State New Kensington, or Penn State York. Two tracks are available to streamline the transition to these baccalaureate degree programs. A general track is provided for students who do not plan to continue their engineering technology education at the baccalaureate level.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Engineering Technology degree in Mechanical Engineering Technology, a minimum of 65 credits is required. This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(12-15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 54-64 credits

(This includes 12-15 credits of General Education courses: 3 credits of GN courses; 3 credits of GQ courses; 6 credits of GWS courses, 0-3 credits of GH or GS.) A First-Year Seminar is required for students at Penn State Behrend.

PRESCRIBED COURSES (23 credits)

CAS 100 GWS(3), IET 101(3) [\[1\]](#), MCHT 111(3) [\[1\]](#) (Sem: 1-2)
IET 215(2), IET 216(2), MCHT 213(3), MCHT 214(1) [\[2\]](#), MET 206(3) [\[1\]](#), MET 210(3), (Sem: 3-4)

ADDITIONAL COURSES (31-41 credits)

ENGL 015 GWS(3); ENGL 030 GWS(3) (Sem: 1-2)
MATH 022 GQ(3), MATH 026 GQ(3); MATH 040 GQ(5) [\[2\]](#) [\[3\]](#); MATH 081 GQ(3) [\[2\]](#) [\[3\]](#), MATH 082 GQ(3) [\[2\]](#) [\[3\]](#) (Sem: 1-2)
PHYS 150 GN(3); PHYS 211 GN(4); PHYS 250 GN(4) (Sem: 1-2)
PHYS 151 GN(3); PHYS 212 GN(4); PHYS 251 GN(4) (Sem: 1-2)

Select at least 19-24 credits from one of the following three tracks: a. General Track, b. Baccalaureate Electro-Mechanical Engineering Technology (EMET) Track, or c. Baccalaureate Mechanical Engineering Technology (METBD or M E T) Track.

a) General Track

EDSGN 100(3), EET 105(3), MET 107(3) (Sem: 1-2)
EDSGN 110(2); EGT 114(2) (Sem: 1-2)
STS 200 GS(3); STS 233 GH(3); STS 245 GS; IL(3) (Sem: 3-4)

Select at least 6 credits from the approved supporting course list for Track a.

b) Baccalaureate Electro-Mechanical Engineering Technology (EMET) Track

CMPET 117(3)[2], CMPET 120(1)[2], EDSGN 100(3), EET 105(3) (Sem: 1-2)
EDSGN 110(2); EGT 114(2) (Sem: 1-2)
EET 114(4)[2], EET 118(1)[2] (Sem: 3-4)
MATH 083 GQ(4)[2][3] or MATH 140 GQ(4)[2][3] (Sem: 3-4)
STS 200 GS(3); STS 233/PHIL 233 GH(3); STS 245 GS;IL(3) (Sem: 3-4)

c) Baccalaureate Mechanical Engineering Technology (METBD or M E T) Track

EGT 120(3), EGT 121(3), MET 107(3) (Sem: 1-2)
EET 100(3) (Sem: 3-4)
Select 1 credit of First-Year Seminar (Sem: 1-2)
Select 6 credits from the approved supporting course list for Track c (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] Students pursuing the baccalaureate track must take MATH 022 and MATH 026

[3] Students who choose to take MATH 081 and MATH 082 must select MATH 083. Students who choose to take MATH 022 and MATH 026 must select MATH 140.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-048C

Review Date: 1/10/2017

UCA Revision #1: 8/3/06

UCA Revision #2: 7/30/07

[Comments](#)

EN

Medical Laboratory Technology

University College (2 MLT): Penn State Hazleton

This two-calendar-year Medical Laboratory Technology major (four semesters, two summer sessions) is designed to provide the necessary general and technical training for hospital personnel between the level of the medical laboratory technician (certificate program) and the medical technologist (baccalaureate program). The course of study includes one year of intensive clinical experience at an affiliated hospital and the theoretical background necessary for the clinical procedures performed by the certified medical laboratory technician (associate degree program). Upon completion of program requirements, the student receives the associate degree and is eligible to sit for examinations leading to certification and registry as a medical laboratory technician.

The Medical Laboratory Technology Program at Penn State Hazleton is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS, 5600 N. River Rd, Suite 720, Rosemont, IL 60018-5119, Phone 847-939-3597 Website: <http://www.naacls.org>).

Graduates of this accredited MLT program are eligible to take national certification examinations such as the American Society of Clinical Pathology (ASCP) Board of Certification exam, to become certified as an MLT (ASCP).

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Medical Laboratory Technology, a minimum of 72 credits is required. (Scheduling of courses in summer session depends on campus location.)

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(12 of the 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 63-65 credits

(This includes 12 credits of General Education courses; 3 credits of GWS courses; 6 credits of GN courses; 3 credits of GQ courses.)

PRESCRIBED COURSES (56 credits)

BIOL 141 GN(3), BIOL 142(1), CHEM 110 GN(3), CHEM 111 GN(1), MICRB 201(3), MICRB 202(2) (Sem: 1-2)

CAS 100 GWS(3), CHEM 202(3), ENGL 015 GWS(3), MICRB 150(4)[\[1\]](#), MIS 103(3) (Sem: 1-2, Summer)

MICRB 151A(5)[\[1\]](#), MICRB 151B(5)[\[1\]](#), MICRB 151C(4)[\[1\]](#), MICRB 151D(2)[\[1\]](#), MICRB 151E(2)[\[1\]](#), MICRB 151F(2)[\[1\]](#), MICRB 151G(2)[\[1\]](#), MICRB 151W(5)[\[1\]](#) (Sem: 3-4)

ADDITIONAL COURSES (7-9 credits)

BIOL 110 GN(4) or BIOL 129 GN(4) (Sem: 1-2, Summer)

MATH 021 GQ(3), MATH 022 GQ(3), MATH 026 GQ(3), MATH 040 GQ(5), MATH 081 GQ(3), MATH 110 GQ(4), MATH 140 GQ(4); or STAT 200 GQ(4); or STAT 250 GQ(3) (Sem: 1-2)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-076

Review Date: 1/10/2014

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

UC

Physical Therapist Assistant

University College (2 PTA): Penn State DuBois, Penn State Fayette, Penn State Hazleton, Penn State Mont Alto, Penn State Shenango

PROFESSOR RENEE L. BORROMEO, *Director, Penn State Mont Alto*
 PROFESSOR BARBARA E. REINARD, *Coordinator, Penn State DuBois*
 PROFESSOR STACY A. SEKELY, *Coordinator, Penn State Fayette*
 PROFESSOR ROSE PETRILLA, *Coordinator, Penn State Hazleton*
 PROFESSOR GIZELLE DEAN, *Coordinator, Penn State Shenango*

This major helps prepare individuals to provide physical therapy services under the direction of a physical therapist in an ethical, safe and effective manner. Students develop knowledge and skills in data collection and the appropriate use of equipment and exercise associated with various physical therapy treatment modalities. In order to accomplish these tasks, the major utilizes a combination of basic science and non-science course work coupled with courses specifically designed for the physical therapist assistant student. Students must progress through the program as prescribed by the recommended academic plan for their campus of admission. The program culminates with full-time clinical experiences.

The size of each entering class is limited so that optimal clinical experiences and practical application situations can be maintained. Clinical affiliations are maintained over a wide geographical area, and students may be required to make special housing and transportation arrangements for the clinical phase. Prior to the beginning of the clinical practicum, PTA students are required to complete clinical requirements that may include, but are not limited to: health examination, immunizations, FBI fingerprint check, child abuse clearance, state background check and drug screening. Students will be responsible for completion and purchase of the necessary checks/clearances through a University approved vendor and providing results to the clinical sites.

In addition to a PTA certification/licensure, many state licensing boards and clinical facilities require a criminal background check, child abuse clearance, and a drug screening. Students with criminal records should contact the physical therapy licensing board in the state they plan to practice prior to applying for admission to the PTA Program to inquire about potential restrictions for licensure.

The Associate of Science degree in Physical Therapist Assistant at Penn State is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; telephone: 703-706-3245; email: accreditation@apta.org; website: <http://www.capteonline.org>. Graduation from a physical therapist assistant education program accredited by CAPTE is necessary for eligibility to sit for the licensure examination, which is required in all states.

ENTRANCE REQUIREMENTS: Students must request a Dean's review to change to this Associate degree after admission to the University.

For the Associate in Science degree in Physical Therapist Assistant, a minimum of 70 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(9-12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 59 credits

(This includes 9-12 credits of General Education courses; 3-6 credits of GWS courses; 3 credits of GN courses; 3-6 credits of GS courses.)

PRESCRIBED COURSES (48 credits)

BIOL 129 GN(4) [\[1\]](#), BIOL 141 GN(3) [\[1\]](#), BIOL 142(1) [\[1\]](#), ENGL 15 GWS(3), P T 100(3) [\[1\]](#), PSYCH 100 GS(3), PT 120(2) [\[1\]](#), PT 150(2) [\[1\]](#), PT 160(3) [\[1\]](#), PT 250(3) [\[1\]](#), PT 260(3) [\[1\]](#), PT 285(2) [\[1\]](#), PT 290 (1) [\[1\]](#), PT 384(4) [\[1\]](#), PT 395E(3) [\[1\]](#), PT 395F(4) [\[1\]](#), PT 395G(4) [\[1\]](#) (Sem: 5)

ADDITIONAL COURSES (13 credits)

Select 3 credits from CAS 203 GS(3), ENGL 202C GWS(3), HFDS 129 GA(3), PSYCH 212(3) or PSYCH 270(3) (Sem: 1-5)

Select 5 credits from PT 270(5) [\[1\]](#) or PT 270W WAC(5) [\[1\]](#) or PT 271(3) [\[1\]](#) and PT 272 (2) [\[1\]](#) or PT 271W WAC [\[1\]](#) and PT 272(2) [\[1\]](#)

Select 5 credits from PT 280(5) [\[1\]](#) or PT 280W WAC(5) [\[1\]](#) or PT 281(2) [\[1\]](#) and PT 282(3) [\[1\]](#) or PT 281(2) [\[1\]](#) and PT 282W WAC(3) [\[1\]](#) (Sem: 3-4)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

*Courses that include clinical education experiences may require the student to travel long distances or obtain housing near the assigned clinic. Housing and transportation arrangements are the responsibility of the student.

Last Revised by the Department: Spring Semester 2018

Blue Sheet Item #: 46-05-074

Review Date: 2/20/2018

UCA Revision #1: 8/9/06

DS/MA/HN/SV

Radiological Sciences

University College: Penn State New Kensington (2RSCC), Penn State Schuylkill (2RSCC)

For students interested in pursuing an education in the paramedical field of radiography (radiologic technology), the radiological sciences major meets the educational and clinical requirements for the graduate to function as an entry-level radiographer. Required course work is divided into three interrelated areas including general education, radiography specific, and clinical education components. During the clinical education component, students perform radiographic exams under the directed supervision of certified radiographers at multiple area clinical education settings. The clinical component emphasizes the concepts of team practice and patient-centered care. Both the radiography-specific course work and the clinical component are structured sequentially over six or seven consecutive semesters, commencing each fall semester. Upon successful completion of the 72-credit associate degree, the graduate will be eligible to attempt the American Registry of Radiologic Technologists (ARRT) examination for certification.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Radiological Sciences, a minimum of 72 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 66 credits

(This includes 15 credits of General Education courses: 3 credits of GH courses; 3 credits of GN courses; 3 credits of GQ courses; 3 credits of GS; 3 credits of GWS courses.)

PRESCRIBED COURSES (59 credits)

BIOL 129 GN(4)[\[1\]](#), RADSC 101(4)[\[1\]](#), RADSC 110(3)[\[1\]](#) (Sem: 1)
BIOL 141 GN(3), ENGL 015 GWS(3), IST 110 GS(3), MATH 021 GQ(3), PHIL 103 GH(3), RADSC 102(4)[\[1\]](#), RADSC 103(3)[\[1\]](#), RADSC 204(3)[\[1\]](#), RADSC 205(3)[\[1\]](#),
RADSC 210(3)[\[1\]](#), RADSC 220(3)[\[1\]](#), RADSC 295B(1)[\[1\]](#), RADSC 295D(1)[\[1\]](#), RADSC 230(3)[\[1\]](#) (Sem: 1-5)
RADSC 206(3)[\[1\]](#), RADSC 240(2)[\[1\]](#) (Sem: 5-6)
RADSC 207(4)[\[1\]](#) (Sem: 6-7)

ADDITIONAL COURSES (7 credits)[\[1\]](#)

At Penn State New Kensington:

Take 7 credits from RADSC 295A(1.5), RADSC 295C(2), RADSC 295E(1.5), RADSC 295F(2) (Sem: 1-6)

OR

At Penn State Schuylkill:

Take 7 credits from RADSC 295A(1), RADSC 295C(1), RADSC 295E(2), RADSC 295G(1), RADSC 295I(2) (Sem: 1-7)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-079

Review Date: 1/10/2017

CL/UC

Science

Altoona College (2SCAL)

The Science major is designed primarily to provide for the basic educational needs of students who want to pursue professional programs in various scientific or medical fields. The program provides a fundamental group of science courses of value to those who seek positions in government or industry where such knowledge is necessary or desirable. The program offers sufficient flexibility to meet diverse academic and career goals.

Graduates of the of the program may qualify for admission to the baccalaureate degrees in science. Students planning on continuing in baccalaureate degrees are encouraged to work closely with their advisers.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Science, a minimum of 67 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 61 credits

(This includes 15 credits of General Education courses: 3 credits of GN courses; 3 credits of GQ courses; 3 credits of GWS courses; 3 credits of GH courses; 3 credits of GQ, GWS, GH, or GN courses.

PRESCRIBED COURSES (14 credits)

BIOL 110 GN(4)[\[1\]](#), CAS 100 GWS(3)[\[1\]](#), CHEM 110 GN(3)[\[1\]](#), CHEM 111 GN(1)[\[1\]](#), ENGL 015 GWS(3)[\[1\]](#) (Sem: 1-4)

ADDITIONAL COURSES (22-27 credits)

(Note: PHYS 250 and PHYS 251 and MATH 140 are recommended for students planning to continue in baccalaureate programs of science.)

Select 4-6 credits from MATH 022 GQ(3), MATH 026 GQ(3), or MATH 040 GQ(5), or MATH 140 GQ(4) (Sem: 1-2)

Select 3-4 credits from STAT 200 GQ(4), STAT 250 GQ(3) (Sem: 1-4)

Select 3 credits from PHIL 002 GH(3), PHIL 103 GH(3), PHIL 103 GH(3), PHIL 110 GH(3), PHIL 118 GH(3), PHIL 221 GH(3) (Sem: 1-4)

Select 3 credits from CMPSC 100(3), MIS 103(3), CMPSC 101 GQ(3) (Sem: 1-4)

Select 6-8 credits from PHYS 150 GN(3) and PHYS 151 GN(3) or PHYS 250 GN(4) and PHYS 251 GN(4) (Sem: 2-4)

Select 3 credits from CHEM 112 GN(3), CHEM 202(3) (Sem: 2-4)

SUPPORTING COURSES AND RELATED AREAS (20-25 credits)

Select 20-25 credits from approved departmental list of BIOLOGICAL/MATH/PHYSICAL SCIENCES (Sem: 1-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-013C

Review Date: 1/10/17

UCA Revision #1: 8/14/06

UC/AL/CL

Surveying Engineering Technology

University College: Penn State Wilkes-Barre (2 SRT)

PROFESSOR FRANK DERBY, Program Coordinator, Penn State Wilkes-Barre

PROFESSOR IVAN E. ESPARRAGOZA, Director of Engineering Technology and Commonwealth Engineering, Penn State Brandywine

PROFESSOR SVEN BILÉN, Head, School of Engineering Design, Technology, and Professional Programs, Penn State University Park

The Surveying Engineering Technology major provides the basic undergraduate education required for private and public service as a technician in the surveying profession. Basic knowledge is provided in the areas of boundary, construction, topographic, and photogrammetric surveying. The curriculum is designed to develop an individual understanding of the skills and equipment needed to make precise surveying measurements.

Program Educational Objectives

Specific educational objectives of the program are to prepare graduates who, after the first few years of their surveying careers:

1. Proficiently apply basic principles and methods of surveying practice to perform surveys and analyze results
2. Effectively convey technical and professional information in written, verbal, and graphic forms, as individuals and as members of a professional team
3. Demonstrate their recognition of the importance of professional organizations for their development as surveying technologists
4. Demonstrate their recognition of the need for continuous, life-long learning

Program Outcomes (Students Outcomes)

The SRT program has adopted for its program student outcomes the following outcomes as listed in the general criteria of the TAC of ABET "Criteria for Accrediting Engineering Technology Programs, 2012-2013." Each program must demonstrate that graduates have:

- a) an ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities;
- b) an ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge;
- c) an ability to conduct standard tests and measurements, and to conduct, analyze, and interpret experiments;
- d) an ability to function effectively as a member of a technical team;
- e) an ability to identify, analyze, and solve narrowly defined engineering technology problems;
- f) an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- g) an understanding of the need for and an ability to engage in self-directed continuing professional development;
- h) an understanding of and a commitment to address professional and ethical responsibilities, including a respect for diversity; and
- i) a commitment to quality, timeliness, and continuous improvement.

Also adopted are the following TAC of ABET's Program Criteria for Surveying/Geomatics Engineering Technology Programs, 2012-2013. Associate degree programs must demonstrate that graduates are capable of:

- a) Utilizing modern measurement technologies to acquire spatial data;
- b) Employing industry-standard software to solve technical problems.

Graduates of the Surveying Engineering Technology major may qualify for admission to the baccalaureate degree majors in Surveying Engineering at Penn State Wilkes-Barre or Structural Design and Construction Engineering Technology at Penn State Harrisburg.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Engineering Technology degree in Surveying Engineering Technology, a minimum of 67 to 70 credits is required. This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 58-61 credits

(This includes 12 credits of General Education courses: 3 credits of GN courses; 3 credits of GQ courses; 6 credits of GWS courses.)

PRESCRIBED COURSES (31 credits)

SUR 111(4) [1], SUR 162(3) [1] (Sem: 1-2)

SUR 212(4), SUR 222(3), SUR 241(3), SUR 262(2), SUR 272(3) [1], SUR 313(3), SUR 362(3), SUR 372(3) (Sem: 3-4)

ADDITIONAL COURSES (27-30 credits)

CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 1-2)

EDSGN 100(3); or EGT 101(1), EGT 102(1) and ET 002(1) (Sem: 1-2)

ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)

ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 3-4)

MATH 022 GQ(3) and MATH 026 GQ(3); or MATH 040 GQ(5) (Sem: 1-2)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 3-4)

PHYS 150 GN(3) or PHYS 211 GN(4) or PHYS 250 GN(4) (Sem: 1-2)

PHYS 151(3) or PHYS 212 GN(4) or PHYS 251 GN(4) (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-048D

Review Date: 1/10/2017

UCA Revision #2: 7/30/07

EN

Turfgrass Science and Management

University Park, College of Agricultural Sciences (2 TSM)
World Campus

PROFESSOR ANDREW S. McNITT, Program Coordinator

445 ASI Building

814-863-1368

asm4@psu.edu

The Turfgrass Science and Management (2 TSM) major prepares graduates for the Bachelor of Science in Turfgrass Science (TURF) program or direct entry into the work place. The primary objective of this major is to train current/future turfgrass facility managers in communicative and mathematical skills, and initiate student mastery of technical aspects unique to management of turfgrass systems.

Graduates of this program are qualified to support golf course, landscape, and athletic field maintenance operations; production of sod commodities; equipment sales and service; and technical research programs. Graduates may also apply their credits to pursue completion of Baccalaureate programs such as Soil Science, Environmental Resource Management, Recreation and Parks Management, and Turfgrass Science (TURF). Students who plan to continue in the TURF degree program should meet with their advisors regarding entrance to major and other requirements.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Turfgrass Science and Management, a minimum of 61 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this Bulletin.)

UNITED STATES CULTURES OR INTERNATIONAL CULTURES:

(Included in ELECTIVES or SUPPORTING COURSES AND RELATED AREAS course selections) (Sem: 1-4)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR) (Sem:1-4)

ELECTIVES: 3 credits (Sem: 1-4)

REQUIREMENTS FOR THE MAJOR: 52 credits

(This includes 15 credits of General Education courses: 6 credits of GN courses; 3 credits of GQ courses; 3 credits of GWS courses; 3 credits of GH courses.)

PRESCRIBED COURSES (31 credits)

BIOL 011 GN(3), CHEM 202(3), ENGL 015 GWS(3), ENT 317(3)[\[1\]](#), MATH 021 GQ(3), PHIL 103 GH(3), SOILS 101 GN(3)[\[1\]](#), TURF 230(1)[\[1\]](#), TURF 235(3)[\[1\]](#), TURF 238(3)[\[1\]](#), TURF 295(3) (Sem: 1-4)

ADDITIONAL COURSES (3 credits)

Select 3 credits from CHEM 101 GN(3) or CHEM 110 GN(3) (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 9 credits from department professional agriculture list (Sem: 1-4)

Select 9 credits from department professional management and economics list, 3 of the 9 credits must be from bolded sub-list (Sem: 1-4)

[\[1\]](#)Classes in which students pursuing the 2 TSM degree must earn a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-004B

Review Date: 1/10/2017

Wildlife Technology

*University College: Penn State DuBois
University Park, College of Agricultural Sciences (2 WLT)*

PROFESSOR AARON STOTTLEMYER, *in charge*, Penn State DuBois

The Wildlife Technology major helps prepare students in the techniques of wildlife management. Personnel trained in this field are needed to assist in the applied phases of natural resource management, wildlife biology, range management, and the care, maintenance, and propagation of animals. Graduates should be able to support professionals in wildlife biology, park managers, game refuge managers, and laboratory technicians in research. The Wildlife Technology Program is accredited by the North American Wildlife Technology Association (NAWTA).

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Wildlife Technology, a minimum of 65 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits
(9 of these 21 credits are included in REQUIREMENTS FOR THE MAJOR.)

REQUIREMENTS FOR THE MAJOR: 53 credits
(This includes 9 credits of General Education courses: 3 credits of GN and 6 credits of GWS.)

PRESCRIBED COURSES (46 credits)
BIOL 110 GN(4), FORT 150(3), FORT 160(3), ENGL 202C GWS(3), WILDL 101(3)[\[1\]](#), WILDL 103(4)[\[1\]](#), WILDL 106(4) (Sem: 1-2)
AG 113(1), CAS 100 GWS(3), FOR 242(3), KINES 013 GHA(1), WILDL 207(3), WILDL 208(3)[\[1\]](#), WILDL 211(4), WILDL 213(4) (Sem: 3-4)

ADDITIONAL COURSES (7 credits)
Select 3 credits from: ENGL 015 GWS(3) or ENGL 030 GWS (3) (Sem: 1-2)
Select 4 credits from: WILDL 204(4) or STAT 200 GQ(4) (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-004C

Review Date: 1/10/2017

AG

Human Development and Family Studies

Altoona College (2FSAL)

University College (2FSCC): Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Mont Alto, Penn State Schuylkill, Penn State Shenango, Penn State Worthington Scranton, Penn State York

University Park, College of Health and Human Development (2EHFS): offered via World Campus

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

For more information, contact 119 Health and Human Development Building, University Park campus.

This major integrates practical and academic experiences to provide the student with entry-level professional competence in the human service field. The objective of the major is to offer a general education background, a knowledge base in life span and family development, and a core of professional skills that may be applied in program planning and service delivery activities. The major is offered part-time, in the evening, and through independent learning.

ADULT DEVELOPMENT AND AGING SERVICES OPTION: This option is designed to prepare students for a wide variety of service roles in mental health facilities, nursing homes and other institutions for the aged, area agencies on aging, public welfare and family service agencies, women's resource centers, human relations programs, employee assistance programs and consumer services and consumer relations programs in business and industry. An improved field experience in any of a wide variety of settings that serve adults, the aged, and their families, is required for this option.

CHILDREN, YOUTH, AND FAMILY SERVICES OPTION: This option is designed to prepare students for service roles in preschools; day care centers; hospitals; institutional and community programs for emotionally disturbed, abused, or neglected children and adolescents; as well as a variety of public welfare and family service agencies. An approved field experience in a children, youth, or family services setting is required for this option.

EARLY CHILDHOOD CARE AND EDUCATION OPTION: This option is designed to increase professional capabilities in child care training in regard to issues of quality, affordability, and accessibility of programming. The primary foci are on language, literacy, and science reasoning. In the course work, there is a blending of theory and practice that requires experience in a group setting with young children. Courses concentrate on infants and toddlers as well as older preschoolers. Each course has a strong parent/family communications component and stresses observation techniques appropriate for assessing and evaluating the development of young children.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate in Science degree in Human Development and Family Studies, a minimum of 60 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(15 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

ELECTIVES: 0-3 credits

REQUIREMENTS FOR THE MAJOR: 51-55 credits

(This includes 15 credits of General Education courses: 6 credits of GWS courses; 3 credits of GS courses; 3 credits of GN courses; and 3 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 30-31 credits

PRESCRIBED COURSES (21 credits)

CAS 100 GWS(3), ENGL 015 GWS(3), HDFS 129 GS(3) [\[1\]](#), HDFS 301(3) [\[1\]](#), PSYCH 100 GS(3) (Sem: 1-2)
HDFS 395(6) (Sem: 3-4)

ADDITIONAL COURSES (9-10 credits)

EDPSY 101 GQ(3) [\[1\]](#), STAT 100 GQ(3) [\[1\]](#), or STAT 200 GQ(4) [\[1\]](#) (Sem: 1-2)
HDFS 315 US(3) [\[1\]](#) or SOC 030 GS(3) (Sem: 3-4)
BIOL 141 GN(3), BIOL 155 GN(3), or BISC 004 GN(3) (Sem: 3-4)

REQUIREMENTS FOR THE OPTION: 21-24 credits

ADULT DEVELOPMENT AND AGING SERVICES OPTION: (21 credits)

PRESCRIBED COURSES (6 credits)

HDFS 249 GS(3) [\[1\]](#), HDFS 311(3) [\[1\]](#) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits in consultation with the adviser from University-wide offerings that enhance competence in the option (Sem: 1-4)

CHILDREN, YOUTH, AND FAMILY SERVICES OPTION: (24 credits)

PRESCRIBED COURSES (9 credits)

HDFS 229 GS(3) [\[1\]](#), HDFS 239 GS(3) [\[1\]](#), HDFS 311(3) [\[1\]](#) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits in consultation with the adviser from University-wide offerings that enhance competence in the option (Sem: 1-4)

EARLY CHILDHOOD CARE AND EDUCATION OPTION: (24 credits)

PRESCRIBED COURSES (24 credits)

HDFS 229 GS(3) [\[1\]](#), HDFS 230(3) [\[1\]](#), HDFS 231(3) [\[1\]](#), HDFS 311(3) [\[1\]](#) (Sem: 1-2)
HDFS 232(3) [\[1\]](#), HDFS 233(3) [\[1\]](#), HDFS 234(3) [\[1\]](#), HDFS 330(3) [\[1\]](#) (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-013B

Review Date: 1/10/17

UCA Revision #1: 8/8/06

HH

Hotel, Restaurant, and Institutional Management

University Park, College of Health and Human Development (2HRIM)

JENNIFER P. WAKEMAN, *Coordinator, Penn State Berks*

The Hotel, Restaurant, and Institutional Management major is an intensive four-semester major designed to prepare students for managerial positions in the hospitality industry. The course of study places heavy reliance on experience acquired in an on-the-job setting.

Students who achieve outstanding records may, upon completing this program, apply for admission to the baccalaureate degree major in Hotel, Restaurant, and Institutional Management in the College of Health and Human Development. Six or more additional semesters of satisfactory work are required to earn the baccalaureate degree. Graduates of this major may qualify for admission to other baccalaureate degree majors.

For the Associate in Science degree in Hotel, Restaurant, and Institutional Management, a minimum of 60 credits is required.

Scheduling Recommendation by semester given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(6 of these 21 credits are included in REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 45 credits

(This includes 6 credits of General Education GWS courses.)

PRESCRIBED COURSES (35 credits)

ENGL 015 GWS(3) [\[70\]](#), ENGL 202D GWS(3) [\[70\]](#), HRIM 201(3) [\[70\]](#), HRIM 228(1) [\[70\]](#), HRIM 250(3) [\[11\]](#), HRIM 270(4) [\[11\]](#), HRIM 295(3), HRIM 319(3) [\[70\]](#), HRIM 329(3) [\[70\]](#), HRIM 335(3) [\[70\]](#), HRIM 336(3) [\[70\]](#), HRIM 380(3) [\[70\]](#) (Sem: 1-4)

ADDITIONAL COURSES (6 credits)

HRIM 204(3) or MKTG 221(3) [\[70\]](#) (Sem: 1-4)

HRIM 260(3) or MGMT 341(3) (Sem: 1-4)

[\[70\]](#) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (4 credits)

Select 4 credits in consultation with adviser to develop more depth in hospitality management (Sem: 1-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[70] These courses are required for the baccalaureate degree in Hotel, Restaurant, and Institutional Management.

Last Revised by the Department: Summer Session 2010

Blue Sheet Item #: 39-01-101

Review Date: 08/24/2010

HH

Labor and Employment Relations

University Park, College of the Liberal Arts (2LBE)

PROFESSOR PAUL CLARK, Director School of Professional LER/HPA

This Associate of Science (A.S.) degree in Labor and Employment Relations permits students to undertake a study of work and the employment relationship in the context of a liberal arts education. An introductory foundation of theoretical and professional knowledge is provided through a multidisciplinary approach. The degree draws on the perspectives of disciplines such as industrial relations, economics, history, law, sociology, and psychology.

Graduates of the Labor and Employment Relations A.S. degree program are equipped for employment in business, government, and labor organizations as labor relations assistants, personnel and human resource assistants, and payroll assistants. The degree is also appropriate preparation for the B.A. or B.S. degree in Labor and Employment Relations, or other social science or business Bachelors' degrees.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the A.S. Degree in Labor and Employment Relations, a minimum of 60 credits is required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

FIRST YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selections or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 9 credits

REQUIREMENTS FOR THE MAJOR: 30 credits [\[1\]](#)

PRESCRIBED COURSES: (15 credits)

ECON 102 GS(3), LER 100 GS(3), PSYCH 281 GS(3), LER 458Y/HIST 458Y US(3), LER 460(3) (Sem: 1-8)

ADDITIONAL COURSES: (6 credits)

LER 136/WMNST 136 US(3); LER 400 IL(3); LER 403 IL(3) (Sem: 1-8)

LER 201 GS(3); LER 401(3) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS: (9 credits)

Select 3 credits of LER courses. (LER courses that are used in the Additional Courses category may not be double-counted to satisfy this requirements. Some courses in this category have prerequisites that are not included in the major.)

Select 6 credits in consultation with adviser from the following list:

ACCTG 211(4), AFAM 100 GS;US(3), AFAM 110 GH;US(3), BA 243(4), CAS 203(3), CAS 352(3), ECON 342 GS(3), HIST 155 GH;US(3), HPA 460(3), HM 365 IL(3), HM 466 US(3), MGMT 100(3), MGMT 301(3), MGMT 321(3), MGMT 341(3), OLEAD 100 GS(3), OLEAD 409(3), SOC 103 US(3), SOC 110 GS;US(3), SOC 119 GS;US(4), or take any 400-level AFAM, CAS, ECON, HIST, LTNST, MGMT, PHIL, PSYCH, SPAN, SOC, WMNST course (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-071A

Review Date: 1/10/2017

**PROGRAM CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS
Begin Date of Enrollment Hold: February 9, 2018**

Mining Technology

University College (2MNGT): Penn State Fayette

The Associate of Science degree in Mining Technology blends basic sciences, mathematics, principles and practices of management, and applied courses in Mining Technology to prepare students for supervisory roles in the Mining industry. This major helps prepare students for either a production-oriented or a maintenance-oriented position in the mining industry. Graduates of this major, after serving the required apprenticeship, should be qualified to become certified managers in their field. All students complete a common core of classes, but must also choose to enroll in one of two emphases, Maintenance or Production.

The maintenance emphasis prepares students to become maintenance supervisors. Initially, graduates may work as apprentice electricians or mechanics to gain experience in repairs and planned maintenance. After certification is obtained, they may become involved with maintenance planning, working as or with the chief mine mechanic or chief mine electrician.

The production emphasis helps prepare students to become mine supervisors or engineering aides. Initially, some of the duties are to run transit and act as survey party chief, keep mine maps up to date and make projections, take samples and run analyses, make time studies, and assist with materials handling layouts.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For the Associate of Science degree in Mining Technology, a minimum of 67 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits
(12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 58- 59 credits
(This includes 12 credits of General Education courses; 6 credits of GWS courses; 3 credits of GN courses; 3 credits of GQ courses)

PRESCRIBED COURSES: (50 credits)
CMPSC 100(3), EDSGN 100(3), ENGL 015 GWS(3), GEOSC 020 GN(3), MATH 081 GQ(3), MATH 082 GQ(3), MNG 223(2), MNGT 030(2), MNGT 100(1)[\[1\]](#), MNGT 110(3), PHYS 150 GN(3) (Sem: 1-2)
CAS 100 GWS(3), MNGT 204(3)[\[1\]](#), MNGT 205W(3), MNGT 210(3), MNGT 211(3), MNGT 214(3), MNGT 216(3)[\[1\]](#) (Sem: 3-4)

ADDITIONAL COURSES: (8-9 credits)
Select 8-9 credits from one of the following two emphases:
a. Maintenance Emphasis: MNGT 207(3), MNGT 208(3), MNGT 209(2) (Sem: 3-4)
b. Production Emphasis: MNGT 202(3), MNGT 213(3), MNGT 215(3) (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Session 2017

Blue Sheet Item #: 45-04-077

Review Date: 1/10/2017

UCA Revision #1: 8/9/06

EN

Occupational Therapy

Berks College (2OTBL)

University College (2OTCC): Penn State DuBois, Penn State Mont Alto, Penn State Shenango

This major helps graduates prepare to be occupational therapy assistants who are qualified to be employed by agencies that provide occupational therapy and related services. The goal of occupational therapy is to enable the client to be as independent as possible in the daily performance of self-care, productive, and leisure occupations. General education, basic science, and occupational therapy courses are followed by supervised field experience. Upon successful graduation from the program, students must sit for and successfully pass the National Board for Certification in Occupational Therapy (NBCOT) national certification examination to practice. Most states also require licensure as a condition for employment. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination and obtain licensure. NBCOT may be contacted at NBCOT, 12 South Summit Avenue, Suite 100, Gaithersburg, MD 20877. 301-990-7979 or on the Web at www.NBCOT.org.

To enter this major, students must have a high school diploma or its equivalent. To be admitted to degree candidacy, the applicant must have completed educational background requirements called Carnegie Units or Secondary School Units. Students are responsible for proof of liability insurance and other requirements specified by the facility providing supervised field experience.

The size of each entering class is limited so that optimal clinical experiences and practical application situations can be maintained. Students are expected to progress through the program in the prescribed manner. Fieldwork affiliations are maintained over a wide geographical area. Students may be required to make special housing and transportation arrangements during the fieldwork phase. Students must complete all Level II fieldwork within eighteen months of successful completion of OTA didactic course work. The 2OTCC and 2OTBL curricula are delivered in five semesters.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

The Penn State Occupational Therapy program is fully accredited by ACOTE which can be reached at: Accreditation Council for Occupational Therapy Education, 4720 Montgomery Lane, Bethesda, MD 20814, 301-652-2682 or on the Web at www.aota.org.

For the Associate in Science degree in Occupational Therapy, a minimum of 69 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 21 credits

(12 of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 60 credits

(This includes 12 credits of General Education courses: 3 credits of GWS courses; 6 credits of GS courses; 3 credits of GN courses.)

PRESCRIBED COURSES (60 credits)

BIOL 129 GN(4) [\[1\]](#), BIOL 141 GN(3) [\[1\]](#), BIOL 142(1) [\[1\]](#), ENGL 015 GWS(3), HDFS 129 GS(3), OT 100(1), OT 101(2) [\[1\]](#), OT 195A(1) [\[1\]](#), PSYCH 100 GS(3) (Sem: 1-2)

OT 103 US(3) [\[1\]](#), OT 105(3) [\[1\]](#), OT 107(3) [\[1\]](#) (Sem: 2-3)

KINES 013 GHA(1), OT 109(3) [\[1\]](#) (Sem: 3-4)

OT 195B(1) [\[1\]](#), OT 201(3) [\[1\]](#), OT 202(3) [\[1\]](#), OT 204(3) [\[1\]](#), OT 206(4) [\[1\]](#) (Sem: 4)

OT 295A(6) [\[1\]](#), OT 295B(6) [\[1\]](#) (Sem: 5)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-037A

Review Date: 1/10/2017

UCA Revision #1: 8/9/06

Workforce Education and Development

University Park, College of Education

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This is a 60 credit program, with many of the courses offered in multiple delivery formats to address the needs of the adult learner, such as a blend of face-to-face and online, delivery via video conference technologies such as Polycom or Adobe Connect, or totally online. It will provide a solid foundation of curriculum pertinent to gaining knowledge and skills required for success in the field of workforce education and development. It will allow the participant to develop the skills and competencies essential to analyzing community and/or organizational needs, recommend and deliver effective education and training programs for process and employee improvement, supervise and lead others, and manage workforce development projects and initiatives. It will also provide the opportunity to network with individuals who share many of the same interests and will enhance the participant's ability to address community and organization needs.

Optional requirements for the major: Of the 16 credits of electives, up to 12 credits of occupational experience can be earned.

ENTRANCE REQUIREMENTS: Students must have a minimum 2.0 GPA to change to this Associate degree after admission to the University.

For an Associate in Science degree in Workforce Education and Development a minimum of 60 credits are required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

GENERAL EDUCATION: 21 Credits
(21 credits of these 21 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in Electives)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in Requirements for the Major)

WRITING ACROSS THE CURRICULUM:
(Included in Requirements for the Major)

ELECTIVES: 16 credits
REQUIREMENTS FOR THE MAJOR: (23 Credits)

PRESCRIBED COURSES (23 credits)
WFED 105(3), WFED 106(3), WFED 207 GWS(3), WFED 310(3), WFED 411(3), WFED 450 US;IL(3), WFED 495D(5) (Sem: 1-4)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-043A

Review Date: 1/10/2017

Baccalaureate Degree Programs

The following definitions, referring to baccalaureate degrees, majors, options, minors, and concurrent or sequential majors programs, have been adopted by the University Faculty Senate:

Baccalaureate Degree--An award signifying a rank or level of educational attainment. Particular types of baccalaureate degrees identify educational programs having common objectives and requirements. Degree programs may provide academic, preprofessional, or professional experiences and preparation. Majors lead to a baccalaureate degree. Each student must select a major within a baccalaureate degree type. If options are offered within a major, a student selects one. The student may also elect to enroll in a minor to supplement the major. Alternatively, the student may seek to enroll in multiple majors within the same type of baccalaureate degree or to enroll in a simultaneous degree program. A baccalaureate program of study shall consist of no less than 120 credits. Students may elect to take courses beyond the minimum requirements of a degree program.

Major--A plan of study in a field of concentration within a type of baccalaureate degree. Colleges and other degree-granting units may have common requirements for all of their majors. Each major may have requirements identified in Prescribed, Additional, and Supporting Courses and Related Areas categories. Elective credits are not considered part of the major. (Senate Record: 1/23/90, Appendix IV)

Option--A specialization within a major that should involve at least one-third of the course work credits required for the major, but need not be more than 18 credits. All options within a major must have in common at least one-fourth of the required course work credits in the major. A student can only be enrolled in an option within his/her own major.

Minor--A minor is defined as an academic program of at least 18 credits that supplements a major. A minor program may consist of course work in a single area or from several disciplines, with at least 6 but ordinarily not more than half of the credits at the 400 course level. Total requirements are to be specified and generally limited to 18 to 21 credits. Entrance to some minors may require the completion of a number of prerequisites, including courses, portfolios, auditions, or other forms of documentation that are not included in the total requirements for the minor. All courses for a minor require a grade of C or above.

Concurrent and Sequential Majors Programs--At the baccalaureate or associate degree level, students may be approved for admission to more than one major under the Concurrent Majors program. A Concurrent Majors program is one in which students take courses to concurrently meet the requirements of at least two majors, with graduation for all majors in the program occurring during the same semester. Concurrent majors must all be at the baccalaureate or associate degree level. Under the Sequential Majors program, upon graduation from an associate or baccalaureate degree program, a student may apply for re-enrollment in another undergraduate degree program.

2/24/12

Architectural Engineering

University Park, College of Engineering (A E)

PROFESSOR M. KEVIN PARFITT, *Interim Head, Department of Architectural Engineering*

This major emphasizes the application of scientific and engineering principles to the planning, design, and construction of buildings and building systems. The goal of the program is to provide engineering graduates with the best education available for careers in the building professions. Graduates will have the ability to practice as registered professional engineers in a variety of areas, both public and private, related to the planning, design, construction, and operation of buildings and to assume a place of leadership in society.

Four options are available in the ten-semester major: the Construction option, which emphasizes building construction engineering and construction management; the Lighting/Electrical option, which emphasizes the design of lighting and electrical systems for buildings; the Mechanical option, which emphasizes the design of heating, ventilating and air-conditioning systems in buildings; and the Structural option, which emphasizes the analysis and design of building structural systems. Courses in architectural design are included in all options to give the engineering student an understanding of architectural design and its relation to engineering. Courses in engineering design are provided throughout the program. The design experience is culminated in a year-long capstone design course.

A limited number of undergraduate students in the B.A.E. program will be considered for admission to one of two integrated undergraduate-graduate degree programs. The first leads to the student earning both the B.A.E. and M.A.E. degrees and involves a graduate-level component in the capstone senior project. The second provides the student with the opportunity to earn both the B.A.E. and M.S. degrees and involves a research-oriented thesis in addition to the capstone undergraduate senior project. Students who are currently enrolled in the 7th semester of the B.A.E. degree program may apply to one of the two integrated programs and will be admitted following a positive review by the faculty committee on graduate admissions. To be considered for admission to either program, students must have attained a GPA of at least 3.0 and a grade of C or better in all classes listed as AE. A commitment from an AE graduate faculty member to serve as the student's M.S. thesis adviser is necessary for admission to the B.A.E./M.S. program. Students admitted to an integrated program must maintain a GPA in all classes used toward the M.A.E. or M.S. degree of at least 3.0. Students must complete a minimum of 172 credits for both the integrated B.A.E./M.A.E. and B.A.E./M.S. degree programs, 18 of which must be at the graduate level (500, 600 or 800-level). For the B.A.E./M.A.E. degree program, all of graduate credits are course credits. For the B.A.E./M.S. degree program, a thesis is required and six credits of thesis research (600 or 610) must be included in the candidate's academic course plan.

The professional degree, Bachelor of Architectural Engineering, is granted upon the satisfactory completion of the five-year program.

Program Educational Objectives:

The undergraduate program in Architectural Engineering is designed to produce graduates who will be:

- Engaged in a professional career in the building industry.
- Qualified and competent to sit for the professional engineering exam.
- Capable of meeting the challenges of the engineering work environment and assuming leadership responsibilities.
- Capable of solving design and project related problems based on sound engineering principles as demanded by their work.
- Successful in conducting multi-disciplinary/inter-disciplinary interactions as required by their work.
- Engaged in service activities in the public and professional realms.

Program Outcomes (Student Outcomes):

The expected educational outcomes:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
- (l) a proficiency in mathematics through differential equations, probability and statistics, calculus based physics, and general chemistry
- (m) proficiency in statics, strength of materials, thermodynamics, fluid mechanics, electric circuits, and engineering economics
- (n) proficiency in a minimum of three (3) of the four (4) basic curriculum areas of structures, building mechanical and electrical systems, and construction/construction management
- (o) Engineering design capabilities in at least two (2) of the three (3) basic curriculum areas of architectural engineering, and that design has been integrated across the breadth of the program
- (p) An understanding of architectural design and history leading to architectural design that will permit communication, and interaction, with other design professionals in the execution of building projects

ENTRANCE TO MAJOR -- Minimum grade point average of 2.6, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250, PHYS 211 (GN) and PHSY 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.A.E. degree in Architectural Engineering, a minimum of 160 credits is required. This baccalaureate program in Architectural Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

For the integrated B.A.E./M.A.E. degrees, a minimum of 172 credits of course work is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits
(33 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 148 credits
(This includes 33 credits of General Education courses: 9 credits of GN courses; 6 credits of GA courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 112 credits**PRESCRIBED COURSES (102 credits)**

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), EDSGN 130(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#) (Sem: 1-2)
 AE 202(3), AE 221(3), AE 222(3), ARCH 130A(6), EMCH 211(3), EMCH 213(3), MATH 250(3) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#), PHYS 213 GN(2) (Sem: 3-4)
 AE 308(4) [\[1\]](#), AE 309(3), AE 310(3) [\[1\]](#), AE 311(3) [\[1\]](#), AE 372(3) [\[1\]](#), AE 481(4), AE 482(4), ARCH 210 GA(3), ARCH 211 GA(3), EE 211(3), EMCH 212(3), ME 201(3), MATH 220 GQ(2-3), MATH 231(2), STAT 401(3) (Sem: 5-6)
 ARCH 441(3), ARCH 443(1) (Sem: 7-8)
 ENGL 202C GWS(3) (Sem: 9-10)

ADDITIONAL COURSES (10 credits)

Select AE 124(1) or 1 credit of another First-Year Seminar (Sem: 1-2)
 ECON 102 GS(3), ECON 104 GS(3), or ECON 014 GS(3) (Sem: 1-2)
 ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)
 CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)

REQUIREMENTS FOR THE OPTION: 36 credits**CONSTRUCTION OPTION: (36 credits)****PRESCRIBED COURSES (24 credits)**

AE 404(3), AE 475(3), AE 476(3), CE 336(3), CE 337(1), MGMT 326(3) [\[19\]](#) (Sem: 7-8)
 AE 472(3), AE 473(3), CE 209(2) (Sem: 9-10)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits from technical courses on department list (Sem: 7-8)
 Select 5 credits from technical courses on department list [\[19\]](#) (Sem: 9-10)
 Select 4 credits of geotechnical courses (Sem: 9-10)

LIGHTING/ELECTRICAL OPTION: (36 credits)**PRESCRIBED COURSES (24 credits)**

AE 404(3), AE 454(3), AE 461(3), AE 467(3), ARCH 442(3) [\[19\]](#) (Sem: 7-8)
 AE 444(3), AE 464(3), AE 466(3) (Sem: 9-10)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits from technical courses on department option list (Sem: 7-8)
 Select 9 credits from technical courses on department option list [\[19\]](#) (Sem: 9-10)

MECHANICAL OPTION: (36 credits)**PRESCRIBED COURSES (27 credits)**

AE 404(3), AE 454(3), AE 455(3), AE 457(3), AE 467(3), ARCH 442(3) [\[19\]](#), ME 320(3), ME 410(3) (Sem: 7-8)
 AE 458(3) (Sem: 9-10)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits from technical courses on department option list [\[19\]](#) (Sem: 7-8)
 Select 6 credits from technical courses on department option list (Sem: 9-10)

STRUCTURAL OPTION: (36 credits)**PRESCRIBED COURSES (23 credits)**

AE 401(3), AE 402(3), AE 403(3), AE 430(3), ARCH 442(3) [\[19\]](#), EMCH 315(2), EMCH 316(1) (Sem: 7-8)
 AE 431(3), CE 209(2) (Sem: 9-10)

SUPPORTING COURSES AND RELATED AREAS (13 credits)

Select 9 credits from technical courses on department list [\[19\]](#) (Sem: 7-8)
 Select 4 credits in Geotechnical (Sem: 7-8)

Note: The following substitutions are allowed for students attending campuses where the indicated course is not offered: EDSGN 100(3) can be substituted for EDSGN 130(3).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[19] Students having successfully completed ROTC upon graduation, may apply 3 credits of ROTC to these courses. Additionally, 3 credits of ROTC may be applied to GHA.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-060

Review Date: 8/23/2016

R & T: Approved 5/24/2013

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

EN

Art Education

University Park, College of Arts and Architecture (A ED)

PROFESSOR GRAEME SULLIVAN, *Director, School of Visual Arts*

The purpose of the Art Education program is to prepare knowledgeable, skilled, and caring professional educators to become critical, reflective practitioners, researchers and artists, and agents of change for social justice in diverse contexts of educational practice; generate and disseminate knowledge that leads to new pedagogical understandings on which more effective policies and practices can be grounded; and collaborate across disciplines, professions, and constituencies to promote social change that leads to educational improvement and transformation. An integral part of the program involves a variety of observational and participatory experiences in art learning environments, and an extensive pre-practice internship. Upon completion of the degree, employment prospects and/or acceptance for advanced graduate studies depends upon individual achievement and qualifications. (See also [Teacher Education Programs](#).)

All candidates seeking entrance to Art Education for Schools option must meet the following entrance to major criteria:

1. Minimum 3.00 cumulative GPA and at least 48 credits completed (at the time of application).
2. Satisfaction of any basic-skills or entrance testing requirements as specified by the Pennsylvania Department of Education in force at the time of application for entrance to the major.
3. Complete 6 credits in Quantification (GQ)
4. Complete ENGL 015 or 030
5. Complete 3 credits in literature (GH) (C or higher required)
6. Complete early field experience: AED 101S (C or higher required)
7. Complete education foundation courses: EDPSY 014, PSYCH 100 (C or higher required)
8. Complete art education foundation courses: AED 201W, 211, 212 (C or higher required)
9. Complete art studio & art history foundations: ART 110, 111, 122, ARTH 111, 112 (C or higher required)
10. Complete and document a minimum of 80 hours of paid or volunteer work with age appropriate population. At least 40 of these age-appropriate 80 hours would be satisfied by working with "under-represented" learners whose cultural, social, or ethnic backgrounds differ from the candidate's own.

For the B.S. degree in Art Education a minimum of 134 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12-15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 104 credits

(This includes 12-15 credits of General Education courses 6 credits of GA courses; 3 credits of GS courses; 3-6 credits of GH courses.)

PRESCRIBED COURSES (57 credits)[\[1\]](#)

AED 101S(3), ART 011(1), ART 110(3), ART 111(3), ART 122(3), ARTH 111 GA;IL(3), EDPSY 014(3), PSYCH 100 GS(3) (Sem: 1-2)

AED 201W(3), AED 211 GA(3), AED 212(1), ARTH 112 GA;IL(3) (Sem: 3-4)

AED 323(3), SPLED 400(4) (Sem:3-6)

AED 225 GA;US(3), AED 322(3), AED 401(3), AED 490(3), SPLED 403B(3) (Sem: 3-8)

AED 489(3) (Sem: 7-8)

ADDITIONAL COURSES (33 credits)[\[1\]](#)

Select 12 credits at the beginning level from ART 201(3), ART 203(3), ART 211 US(3), ART 220(3), ART 223(3), ART 230(3), ART 240(3), ART 250(3), ART 280(3), ART 296(3), ART 297(3), ART 299 IL(3), PHOTO 100 GA(3), PHOTO 200(3), or PHOTO 201(3) (Sem: 3-8)

Select 3 credits in literature (GH) courses (Sem: 1-4)

Select 3 credits from APLNG 200 GH;IL(3), APLNG 210 GH;IL(3), or CI 280 GH(3) (Sem: 1-6)

AED 495A(7) and AED 495B(8); or AED 495C(7) and AED 495D(8) (Sem: 8)

SUPPORTING COURSES AND RELATED AREAS (14 credits)[\[1\]](#)

Select 8 credits in Art at the 300 or 400 level (Sem: 3-8)

Select 6 credits in Art History at the 300 or 400 level (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall 2015

Blue Sheet Item #: 44-01-030

Review Date: 9/15/2015

R & T: 01/14/2014

UCA Revision #1: 8/2/06

AA

**PROGRAM CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS
Begin Date of Enrollment Hold: May 30, 2012**

African and African American Studies

University Park, College of the Liberal Arts (AASBA)

PROFESSOR IKUBOLAJEH LOGAN, *Interim Head*

This interdisciplinary major is designed to give students an integrated and critical understanding of the experiences and contributions of peoples of African descent. Students are encouraged to do research and evaluate the relationship between the political, social, and economic developments in Africa and the African Diaspora. Two options are available within the major and are described here.

AFRICAN AMERICAN STUDIES OPTION:

This option provides students with the opportunity to explore the experiences of African Americans using theories and methods originating in the field along with those adopted from the various disciplines. Students are also made aware of the potential to apply knowledge to discern better approaches for solving social, political, and economic problems. The curriculum also promotes greater understanding of the relationship between African American and other ethnic groups in the shaping of American society and culture.

Focus Areas: The African American Studies Option has three focus areas, which are described below.

1. **History Perspective:** While stressing the interdisciplinary nature of the field, this focus allows students to concentrate on the historical experience of the African Americans, including their political, social, and economic relations with other ethnic groups, as well as the shifting historical contexts in which they have contested and shaped the evolution of American society.
2. **Social Sciences and Community Development:** This focus area allows students to concentrate on contemporary political and economic experiences of African Americans as well as on public policy issues that pertain to the economic, political, and social engagement of African Americans in the search for equality in American society.
3. **Cultural and Gender Perspective:** This focus area allows students to concentrate on culture and gender in historical and contemporary terms.

AFRICAN STUDIES OPTION:

This option provides students with the opportunity to examine the geographical, cultural, historical, political, and economic aspects of Africa. This option has two focus areas as described below.

1. **Humanities Perspective:** This focus area enables students to concentrate on the history and culture of African societies and the evolution of Africa in world history.
2. **Social Science Perspective:** This focus area enables students to concentrate on political and economic developments, including state building and ethnic relations, development strategies, and Africa's position in the global system.

LAW AND SOCIAL JUSTICE OPTION:

This multi-disciplinary program would provide students with the opportunity to study the politics, culture, economics, and history of African Americans in our society and link this understanding with an in depth study of criminal justice and the legal system. Issues that students will focus on will be areas such as, Are African Americans discriminated against in criminal justice decision-making? What is the historic connection between race and punishment in the US legal system? How do issues of class, race and gender impact policy decisions about crime and punishment? What is the socioeconomic impact of high incarceration rates on the African American community? The program is designed to encourage students to think systematically about the relationship among public policy, the criminal justice system, and shifting notions of social justice that have characterized debates over the workings and goals of the prison system in American life and thought.

For the B.A. degree in African and African American Studies, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-9 credits of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 9-18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 45 credits^[1]

(This includes 0-9 credits of General Education courses: African American Studies Option -- 0-3 credits of GA courses; 0-3 credits of GH courses; 0-3 credits of GS courses. African Studies Option -- 0-3 credits of GH courses; 0-3 credits of GS courses. Law and Social Justice Option -- 0-3 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 12 credits

PREScribed COURSES (12 credits)

AFR 110 GS;IL(3), AF AM 100 GS;US(3), AF AM/HIST 211 GH;US;IL(3), SOC 207(3) (Sem: 1-4)

REQUIREMENTS FOR THE OPTION: 33 credits

AFRICAN AMERICAN STUDIES OPTION: (33 credits)

PREScribed COURSES (9 credits)

AFAM/WMNST 101 GH;US(3),AFAM/SOC/WMNST 103 US(3) (Sem: 1-4)
AFAM 401(3) (Sem: 5-8)

ADDITIONAL COURSES (24 credits)

Select 24 credits from one of the following three areas of concentration.

A minimum of 12 credits should be AAA S courses, and at least 12 of these credits must be at the 400 level or above.

1. History Perspective:

AFAM/RL ST 147 GH;US(3), AF AM/RL ST 146 GH;US(3), AF AM/HIST 210 GH;US(3), SOC 119 GS;US(4) (Sem: 1-4)

- AFAM/SOC 409 US(3), AFAM 431 US;IL(3), AFAM/HIST 465 US(3), ENGL 461 US(3), ENGL 469 US(3), HIST 152 GH;US;IL(3), PL SC 474(3) (Sem: 5-8)
2. **Social Sciences and Community Development:**
 AF AM/WMNST 102 GH;IL(3), AF AM/RL ST 146 GH;US(3), AFAM/RL ST 147 GH;US(3), AF AM/HIST 210 GH;US(3), SOC 119 GS;US(4) (Sem: 1-4)
 CRIMJ 451 US(3), AF AM/SOC 409 US(3), AF AM 431 US;IL(3), AF AM/HIST 465 US(3), ECON 304 GS(3), ECON 436W US(3), EDTHP 447(3), PL SC 490(3) (Sem: 5-8)
3. **Cultural and Gender Perspective:**
 AF AM/WMNST 102 GH;IL(3), AF AM/RL ST 145 GH;US;IL(3), AFAM/THEA 208 GA;US;IL(3), COMM/WMNST 205 US(3), ENGL 139 GH;US(3), ENGL 235 US;IL(3), MUSIC 007 GA;US(3), SOC 119 GS;US(4) (Sem: 1-4)
 AFAM/THEA 412 US;IL(3), AF AM 410(3), AF AM/CAS 422 US(3), COMM 411(3), EDTHP 411(3), ENGL/WMNST 462 US(3), ENGL 463 US(3), ENGL 467 US(3), ENGL 469 US(3) (Sem: 5-8)

AFRICAN STUDIES OPTION: (33 credits)**PRESCRIBED COURSES** (12 credits)

AFR/HIST 191 GH;IL(3), AFR/HIST 192 GH;IL(3) (Sem: 1-4)

AAA S 400(3), AFR/PL SC 454 IL(3) (Sem: 5-8)

ADDITIONAL COURSES (21 credits)

Select 21 credits from one of the following two areas of concentration.

*A minimum of 12 credits should be AAA S courses, and at least 12 of these credits must be at the 400 level or above.*1. **Humanities Perspective:**

AFR 202 GS;IL(3), CMLIT 003 GH;IL(3), SWA 001(4), SWA 002(4) (Sem: 1-4)

AAA S 404(3), AF AM 431US;IL(3), AF AM/HIST 465 US(3), CMLIT 422 IL(3), CMLIT 423 IL(3), FR 458 IL(3), HIST 479 IL(3), WMNST 420 US;IL(3) (Sem: 5-8)

2. **Social Science Perspective:**

AFR 202 GS;IL(3), SWA 001(4), SWA 002(4) (Sem: 1-4)

AAA S 404(3), AF AM 431US;IL(3), AF AM/HIST 465 US(3), AFR 403(3), ECON 304 GS(3), ECON 471(3), GEOG 444(3), PL SC 453 IL(3) (Sem: 5-8)

LAW AND SOCIAL JUSTICE OPTION: (33 credits)**PRESCRIBED COURSES** (18 credits)

AF AM/HIST 210 GH;US(3), CRIMJ/CRIM/SOC 012 GS(3), CRIM 100(3), CRIMJ/CRIM 113(3) (Sem: 1-4)

AF AM 401(3), CRIM 451 US(3) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)

AFR 440 US;IL(3), AF AM/LER/PL SC 445Y, AF AM/HIST 431 US;IL(3), AF AM/SOC 409 US(3), AF AM 465 US(3), CRIM 430(3), CRIM 433(3), CRIM 435(3), CRIM 441(3), CRIMJ/WMNST 453 US(3), CRIM/SOC 467(3), CRIM 490(3), ECON 436W US(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2004

Blue Sheet Item #: 33-01-130

Review Date: 08/31/04

UCA Revision #2: 7/26/07

Dept head updated by Publications: 5/24/10

LA

**PROGRAM CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS
Begin Date of Enrollment Hold: February 17, 2012**

African and African American Studies

University Park, College of the Liberal Arts (AASBS)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR IKUBOLAJEH LOGAN, *Interim Head*

This interdisciplinary major is designed to give students an integrated and critical understanding of the experiences and contributions of peoples of African descent. Students are encouraged to do research and evaluate the relationship between the political, social, and economic developments in Africa and the African Diaspora. An African American Studies Option, African Studies Option, and a Law and Social Justice Option are available within the major. The methodology requirements of the proposed program would enable our students to engage in social science research. It would also prepare them better for graduate programs in the social sciences.

AFRICAN AMERICAN STUDIES OPTION: This emphasis provides students with the opportunity to explore the experiences of African Americans using theories and methods originating in the field along with those adopted from the various disciplines. Students are also made aware of the potential to apply this knowledge to the solution of social, political, and economic problems. The curriculum also promotes greater understanding of the relationship between African American and other ethnic groups in the shaping of American society and culture.

AFRICAN STUDIES OPTION: This option provides students with the opportunity to examine the geographical, cultural, historical, political, and economic aspects of Africa.

LAW AND SOCIAL JUSTICE OPTION: This multi-disciplinary program would provide students with the opportunity to study the politics, culture, economics, and history of African Americans in our society and link this understanding with an in depth study of criminal justice and the legal system. Issues that students will focus on will be areas such as, Are African Americans discriminated against in criminal justice decision-making? What is the historic connection between race and punishment in the US legal system? How do issues of class, race, and gender impact policy decisions about crime and punishment? What is the socioeconomic impact of high incarceration rates on the African American community? The program is designed to encourage students to think systematically about the relationship among public policy, the criminal justice system, and shifting notions of social justice that have characterized debates over the workings and goals of the prison system in American life and thought. The proposed program would enable us to foster a cadre of students who will be particularly suited to pursue graduate work in the area.

For the B.S. degree in African and African American Studies, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 Credits
(4-10 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in the this bulletin)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 20 credits

REQUIREMENTS FOR THE MAJOR: 64-65 credits^[1]
(This includes 4-10 credits of General Education courses: 4 credits of GQ courses; 6 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 16-17 credits

PRESCRIBED COURSES (13 credits)
AFR 110 GS;IL(3), AF AM 100 GS;US(3), SOC 207(3), STAT 200(4) (Sem: 1-4)

ADDITIONAL COURSES (3-4 credits)
SOC 470(4) or PL SC 309(3) (Sem: 5-8)

AFRICAN AMERICAN STUDIES OPTION: (48 credits)

PRESCRIBED COURSES (9 credits)
AF AM 101 GH;US;IL(3), AAA S/HIST 211 GH;IL(3) (Sem: 1-4)
AAA S 401(3) (Sem: 5-8)

ADDITIONAL COURSES (39 credits)
Select 21 credits with at least 3 credits in AAA S courses
AFAM 83 GH;US;IL(3), AFAM/WMNST 102 GH;IL(3), AFAM/SOC/WMNST 103 US(3), AFAM/RL ST 146 GH;US(3), AAA S/RL ST 147 GH;US(3), AFR 197(3), AFR 199 IL(3), AF AM/HIST 210 GH;US(3), SOC 119 GS;US(3-4), ECON 102 GS(3), ECON 104 GS(3), ECON 304 GS(3) (Sem: 1-8)

Select 18 credits at the 400-level with at least 9 credits in AAA S courses
AAA S/SOC 409 US(3), AAA S 494(3), AFR 495(3), AFR 497(3), AFR 499 IL(3), AFAM/HIST 431 US;IL(3), AFR 440 US;IL(3), AFAM/HIST 465 US(3), AFAM/LER/PLSC 445Y(3), CRIMJ 451(3), ECON 436W US(3), EDTHP 447(3), PL SC 490(3) (Sem: 1-8)

AFRICAN STUDIES OPTION: (48 credits)

PRESCRIBED COURSES (9 credits)
AFR/HIST 191 GH;IL(3), AFR/HIST 192 GH;IL(3) (Sem: 1-4)
AAA S 400(3) (Sem: 5-8)

ADDITIONAL COURSES (39 credits)
Select 21 credits with at least 3 credits of AAA S courses
AFAM 83 GH;US;IL(3), AFR 197(3), AFR 199 IL(3), AFAM/HIST 211 GH;US;IL(3), AFR 297(3), AFR 299 IL(3), AFR 395(3), AAA S 397(3), AFR 399 IL(3), AFR/WMNST 202 GS;IL(3), ECON 102 GS(3), ECON 104 GS(3), ECON 304 GS(3), SWA 001(4), SWA 002(4) (Sem: 1-8)

Select 18 credits at the 400-level with at least 9 credits in AAA S courses
AFR 403(3), AAA S/HIST 431 US;IL(3), AFR 440 US;IL(3), AFR 443 IL(3), AFR/PL SC 454 IL(3), AAA S/HIST 465 US(3), AFAM/LER/PLSC 445Y(3), AAA S 494(3), AFR 495(3), AFR 497(3), AFR 499 IL(3), ECON 471(3), GEOG 444(3), PL SC 453 IL(3) (Sem: 1-8)
Only 3 credits of AAA S 495 (internship) and 6 credits of AFR 497, AFR 495, AAA S 494, or AFR 499 in any combination may be used to satisfy this requirement.

LAW AND SOCIAL JUSTICE OPTION: (48 credits)

PRESCRIBED COURSES: (18 credits)

AFAM 210 GH;US(3), AF AM 401(3), CRIMJ/CRIM/SOC 012 GS(3), CRIMJ/CRIM 100(3), CRIMJ/CRIM 113(3), CRIMJ/CRIM 451 US(3) (Sem: 1-8)

ADDITIONAL COURSES: (30 credits)

Select 30 credits from: AFAM/HIST 431 US;IL(3), AFAM/SOC 409 US(3), AFAM/LER/PLSC 445Y(3), AFAM/HIST 465 US(3), AFR 440 US;IL(3), ECON 436W US(3), CRIMJ/WMNST 453 US(3), CRIM 490(3), CRIM 441(3), CRIM/SOC 467(3), CRIM 430(3), CRIM 433(3), CRIM 435(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2005

Blue Sheet Item #: 33-01-131

Review Date: 8/31/04

UCA Revision #2: 7/26/07

LA

Last department head update by Publications: 5/24/10

Accounting

Penn State Abington (ACCAB)
 Penn State Berks (ACCBL)
 Capital College (ACCT)
 World Campus

JANE KOCHANOV, *Director of Undergraduate Studies, School of Business Administration*

This major helps students prepare for careers in auditing and public accounting, industrial and managerial accounting, and in governmental and not-for-profit accounting. It also provides a sound background for students who plan to pursue graduate studies in accounting or related fields. Students who complete the prescribed courses and earn a Bachelor of Science degree will satisfy the academic requirements to sit for the Certified Public Accountant (CPA) examination. Graduates may also elect to pursue other professional certifications, including Certified Management Accountant (CMA), Certified Internal Auditor (CIA), Certified Fraud Examiner (CFE), and Certified Government Financial Manager (CGFM).

For a B.S. in Accounting a minimum of 120 credits is required. Consistent with Senate policy, at least 24 credits of course work in the major and the capstone course must be completed in the respective College to earn the degree. No more than 60 credits should be from business and business-related courses.

Students wishing to fulfill the 150 credit-hour education option to become a CPA in Pennsylvania (which reduces the experience requirement for certification) are encouraged to enter Capital College's Master of Professional Accounting program, or the Master of Business Administration program, or the Master of Science in Information Systems program subsequent to receiving their undergraduate accounting degree.

Entry to Major Requirements:

Entry to the Accounting major requires the completion of 8 entry-to-major courses: ACCTG 211(4)[\[1\]](#); ECON 102 GS(3); ENGL 015 GWS(3)[\[1\]](#) or ENGL 030 GWS(3)[\[1\]](#); FIN 301(3); MATH 110 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#); MGMT 301(3); MKTG 301(3); SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#); and a 2.00 or higher cumulative grade-point average.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education Course Requirements in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 8 credits of non-business courses

REQUIREMENTS FOR THE MAJOR: 79 credits

(This includes 12 credits of General Education Courses: 3 credits of GWS courses; 3 credits of GS courses; 6 credits of GQ courses)

PRESCRIBED COURSES (55 credits)

ACCTG 211(4)[\[1\]](#) (Sem: 1-4)
 ECON 102 GS(3) (Sem: 1-4)
 ENGL 202D GWS(3) (Sem: 1-4)
 FIN 301(3), MKTG 301(3), MGMT 301(3) (Sem: 1-4)
 BA 364 US:IL(3), BA 462(3)[\[1\]](#), MIS 390(3), SCM 301(3) (Sem: 5-8)
 ECON 104 GS(3), MIS 204(3) (Sem: 5-8)
 ACCTG 310(3)[\[1\]](#), ACCTG 340(3)[\[1\]](#), ACCTG 403(3)[\[1\]](#), ACCTG 471(3)[\[1\]](#), ACCTG 472(3)[\[1\]](#), ACCTG 473(3)[\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (18 credits)

Select 4 credits from MATH 110 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#) (Sem: 1-4)
 Select 4 credits from SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#) (Sem: 1-4)
 BA 243(4) or BA 241(2) and BA 242(2) (Sem: 5-6)
 Select 6 credits[\[1\]](#) from the following: ACCTG 410(3), ACCTG 431(3), ACCTG 432(3), ACCTG 440(3), ACCTG 461 IL(3), ACCTG 462(3), ACCTG 489(3), ACCTG 494(1-12), ACCTG 496(1-18), ACCTG 497(1-9) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from 200-400 level business courses from: ACCTG, BA, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student's interests. (Sem: 3-8)

Integrated B.S. in Accounting and M.B.A. in Business Administration

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Accounting candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Accounting and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Accounting and Master of Business Administration degrees. The total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program. Students in the IUG program take six additional credits in their third year, and six fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

Students have the choice of receiving the B.S. in Accounting degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Accounting degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

ADMISSION REQUIREMENTS

To initiate the application process, students must submit a resume, a personal statement including career goals and how MBA will enhance their career goals, transcripts of courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of the MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Typical students would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211(4), ECON 102(3), ENGL 15 or 30(3), FIN 301(3), MATH 110 or 140(3), MGMT 301(3), MKTG 301(3) and STAT 200(4) or SCM 200(4).

To formally apply, students must submit a completed graduate school application. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admission Committee in Business Administration.

DEGREE REQUIREMENTS

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science in Accounting and Master of Business Administration degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. All courses counted for both degrees must be at the 500- or 800-level.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Reviewed by the Department: Fall Semester 2017

Blue Sheet Item #:46-01-066

Review Date: 8/22/2017

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

CL

Accounting

University Park, Smeal College of Business (ACCTG)

PROFESSOR STEVEN HUDDART, *Chair of the Department of Accounting*

This major prepares students for careers in public, corporate, not-for-profit, and governmental accounting and also provides an appropriate background for those planning to enter law school or graduate school. Accountants develop and interpret historical and prospective financial data required for decision-making by managers, investors, regulators, and other stakeholders. To perform their functions, accountants must synthesize both numerical and qualitative information, communicate it clearly, and function effectively as individuals and in teams. The field of Accounting is diverse and offers students the opportunity to be generalists or concentrate in one of the following:

Corporate Control & Financial Management - Courses in this concentration prepare students for positions in industry, government, and business advisory services doing financial planning, analysis, control, and decision support. Students can obtain such designations as *Certified Management Accountant (CMA)*. Management accountants provide forecasts, compute costs and benefits, perform variance analysis, and review and monitor performance. Managerial accountants also design systems that provide information to decision makers.

Internal Auditing & Assessment - Courses in this concentration prepare students for positions in industry and government as internal auditors. Students can obtain such designations as *Certified Internal Auditor (CIA)*. Internal auditors are employed by the organization they audit. Internal auditing is a systematic approach to evaluating and improving the effectiveness of risk management, control, and governance processes. Internal auditors also review compliance with standards and assess the organization's risks.

Public Accounting - Public accounting is carried on by independent practitioners, most of whom are Certified Public Accountants (CPAs). In addition to statutory audits, CPAs render other assurance, tax, and management advisory services. To be licensed as a CPA in nearly every state, including Pennsylvania, individuals must complete 150 credit-hours of education, pass a demanding professional examination, and meet certain experience requirements. One way to accomplish this is to enroll in the Integrated B.S. in Accounting and Master of Accounting Program.

Entrance Requirement: To be eligible for entrance into the Accounting (ACCTG) major, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy requirements for entrance to the major.

Specific entrance requirements include:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4) [11]; ECON 102 GS(3); SCM 200 GQ(4) [11] or STAT 200 GQ(4) [11]; ENGL 015 GWS(3) or ENGL 030 GWS(3); and MATH 110 GQ(4) [11] or MATH 140 GQ(4) [11]; FIN 301(3) [11]; MGMT 301(3) [11]; and MKTG 301(3) [11]. These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu/>).

For the B.S. degree in Accounting, a minimum of 120 credits is required with at least 15 credits at the 400 level.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 11 credits

REQUIREMENTS FOR THE MAJOR: 76 credits
(This includes 12 credits of General Education courses: 3 credits of GWS courses; 6 credits of GQ courses; 3 credits of GS courses)

PRESCRIBED COURSES (52 credits)
ACCTG 211(4) [11], ECON 102 GS(3), FIN 301(3) [11], MGMT 301(3) [11], MKTG 301(3) [11] (Sem: 1-4)
BA 342(3), BLAW 341(3), ECON 104 GS(3), ENGL 202D GWS(3) [11], MIS 204(3), SCM 301(3), (Sem: 5-6)
ACCTG 403W(3), ACCTG 404(3), ACCTG 405(3) [11], ACCTG 471(3) [11], ACCTG 472(3) [11], BA 411(3) (Sem: 5-8)

ADDITIONAL COURSES (14 credits)
MATH 110 GQ(4) [11] or MATH 140 GQ(4) [11] (Sem: 1-2)
SCM 200 GQ(4) [11] or STAT 200 GQ(4) [11] (Sem: 1-2)
Select 6 credits from the following: ACCTG 406(3), ACCTG 440(3), ACCTG 473(3), ACCTG 481(3), ACCTG 483(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (10 credits)
Select 4 credits: Attainment of 12th credit level proficiency in a single foreign language. Proficiency must be demonstrated by either examination or course work. (Sem: 1-4)
Select 6 credits of supporting coursework. See Department List. (Sem: 5-8)

Integrated B.S. in Accounting and Masters in Accounting Program

The Department of Accounting offers an integrated program allowing students to receive a B.S. in Accounting and Master of Accounting (M.Acc.) degrees within a five-year period. Students typically are admitted into the integrated program in the spring of the second year of the undergraduate program and the program is completed in the subsequent three years. The program is designed to meet the educational requirements for becoming a certified public accountant in Pennsylvania as well as most other states. Certified public accountants conduct independent audits and provide accounting, tax, and management advisory services. The program prepares students to enter into careers in public accounting, corporate accounting, management accounting, governmental accounting, financial analysis, and law enforcement. In addition, the program is appropriate for students having an interest in entering law school and graduate programs in business, such as M.B.A. programs or doctoral programs.

Admissions Requirements

Students will generally apply for the program in the spring of their second year of undergraduate study. To apply for the program students must:

- (1) be enrolled in the Smeal College of Business or Division of Undergraduate Studies and intend to complete the entrance-to-major requirements by the end of the spring semester in which they apply and
- (2) complete a Graduate School application for graduate study.

Although the program has no fixed minimum grade-point requirement, an applicant is generally expected to have grade-point average of at least 3.20 on

Penn State's grading scale of A (4.00) to D (1.00).

In addition, the Department may request an interview with an applicant, or require a GMAT exam or other exam. Admissions decisions will be based upon the student's application, undergraduate record, SAT scores and, if applicable, interviews and examination results.

Admitted students must have completed ACCTG 211 with superior performance by the end of the spring semester in which they apply for admission to the program. A student who has not satisfied this requirement by the admissions deadline may be provisionally admitted pending completion of ACCTG 211 with a superior performance.

Degree Requirements

Students must complete the requirements for a B.S. in accounting with the following alterations:

Some of prescribed courses for the B.S. must be taken in sections that are available only to students enrolled in the program. These prescribed courses, which all count toward the undergraduate degree in accounting, are: ACCTG 403W, ACCTG 404, ACCTG 405, ACCTG 471, and ACCTG 472.

The student need not satisfy the requirement that 6 credit hours be completed from the following list of courses: ACCTG 406, ACCTG 432, ACCTG 473, and ACCTG 481.

The following courses cannot be used to satisfy the degree requirements of the integrated program: ACCTG 406, ACCTG 410, ACCTG 411, ACCTG 422, ACCTG 450, ACCTG 473, and ACCTG 481.

Students must complete the Master of Accounting Requirements, which total 30 credit hours of graduate instruction, in addition to completing 120 credit hours of undergraduate instruction.

The following courses, totaling 9 credit hours, will double-count towards both the B.S. and Master of Accounting degrees: BLAW 444(3), FIN 531(3), and ACCTG 881(3).

Students must complete a minimum of 30 credits hours of graduate instruction over and above the 120 credit hours required of the B.S. degree in accounting. All 30 of these credit hours must be earned in 400-level, 500-level, or 800-level courses. At least 18 of the 30 credit hours must be earned in 500-level and 800-level courses, and at least 6 of the 30 credit hours must be earned in 500-level courses.

Students must complete the following required courses as part of the 30 credit hours of graduate instruction: ACCTG 432(3), ACCTG 440(3), ACCTG 803(3), ACCTG 806(3), ACCTG 873(3), ACCTG 881(3), BA 817(3), BLAW 444(3), FIN 531(3).

These courses must be taken in sections that are available only to students enrolled in the integrated program. Note that these required courses satisfy 27 of the 30 credit hour minimum. In addition, after completing these courses, the student will have satisfied the requirement that 18 credit hours must be earned in 500-level or 800-level courses and the requirement that 6 credit hours must be earned in 500-level courses.

Student must have satisfactory academic performance to maintain enrollment in the program. A grade point average of 3.0 in the 30 credit hours of graduate instruction is required to receive the master's degree.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-026

Review Date: 04/09/2013

Accounting

Penn State Erie, The Behrend College (ACNTG)

The Accounting major provides an opportunity to pursue a unique program that integrates knowledge and skill in accounting and information management. It helps prepare students for positions in public accounting firms, corporations, and government, where accounting skills are essential. In addition, the accounting major provides the necessary academic training for students interested in administrative responsibilities in the area of accounting.

Entrance to Major Requirements:

Entry to the Accounting major requires the completion of 5 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 015 GWS(3) or ENGL 030 GWS(3); MATH 110 GQ(4) or MATH 140 GQ(4); STAT 200 GQ(4) or SCM 200(4), and a 2.00 or higher cumulative grade-point average.

For the B.S. degree in Accounting, a minimum of 120 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 1 credit

REQUIREMENTS FOR THE MAJOR: 89 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (56 credits)

ACCTG 211(4), ECON 102 GS(3), ECON 104 GS(3), ENGL 202D GWS(3) (Sem: 3-4)

FIN 301(3)[1], MGMT 301(3)[1], MIS 204(3), MKTG 301(3), SCM 301(3)[1] (Sem: 3-6)

ACCTG 310(3)[1], ACCTG 312(3)[1], ACCTG 371(4)[1], ACCTG 472(3)[1] (Sem: 5-6)

ACCTG 340(3)[1], ACCTG 403(3)[1], ACCTG 422(3)[1], ACCTG 450(3)[1], MGMT 471W(3)[1] (Sem: 7-8)

ADDITIONAL COURSES (21 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

BA 241(2) and BA 242(2) or BA 243(4) (Sem: 3-6)

Select 3 credits from ECON 470(3), ECON 473 IL(3)[1], FIN 471 (3)[1], MGMT 461 IL(3)[1], MKTG 445(3)[1], or other 400-level international business course (Sem: 5-8)

Select 6 credits from ACCTG 410(3)[1], ACCTG 411(3)[1], ACCTG 440(3)[1], ACCTG 495(1-18)[1], BLAW 444(3)[1], or other 300- to 400-level courses either within the major or from other business areas (see School list of approved courses) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from the approved electives course list for the major. (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2010

Blue Sheet Item #: 39-01-054

Review Date: 08/24/2010

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

BD

Acting

College of Arts and Architecture (ACTNG_BFA)

PROFESSOR Steven Snyder, Associate Professor of Theatre

The BFA in Acting is an intensive training program for students who intend to pursue a career in acting for stage and film. Admission is determined via an audition and interview process, in addition to admission to the University Park campus. Four years of studio training include one semester in the Theatre Academy of London for advanced training. Performance opportunities are provided for the student, but must be earned through audition. Education in theatre and the general education curriculum provides depth to the actor's intellectual and artistic development. Concurrent majors and minors are allowed only with pre-approval of the program. Like all programs in the School of Theatre, the BFA in Acting is subject to NAST (National Association of Schools of Theatre) accreditation.

ENTRANCE REQUIREMENTS: Admission to the program includes acceptance to the University Park campus, application to the program, an audition, and an interview with primary faculty members. Video taped auditions and video interviews may be arranged.

RETENTION REQUIREMENTS: Retention will be determined through the process of scheduled reviews, in concert with verification of sustained academic growth as demonstrated by earning of grades of C or higher within the major. Failure to do so is grounds for an academic warning, with clear written strategies and a time frame for the student to return to good standing. Should the issues not be addressed by the student, the faculty may advise the student into a different program or major.

For a Bachelor of Fine Arts in BFA Acting, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(12 of these credits are included in the REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 1 credit

REQUIREMENTS FOR THE MAJOR: 87 credits [\[1\]](#)
(This includes 12 credits of General Education courses: 3 credits of GHA, 3 credits of GN, 6 credits of GA)

PRESCRIBED COURSES (78 credits)
DANCE 270 GHW(3), DANCE 361 GA(1.5), DANCE 362 GA(1.5), DANCE 370 GN(3), MUSIC 113(1)[18], MUSIC 114(1)[18], PHOTO 100 GA(3)[18], THEA 1S(1)[18], THEA 100 GA;US;IL(3)[18], THEA 115(2), THEA 132(3)[18], THEA 146(2)[18], THEA 150(3)[18], THEA 209(3), THEA 225A(2), THEA 225B(2), THEA 225C(2), THEA 289(1)[18], THEA 322(2), THEA 324(2), THEA 325(2), THEA 401 IL(3)[18], THEA 402(3)[18], THEA 420(3), THEA 421(3), THEA 422(3), THEA 425A(2), THEA 425C(2), THEA 427A(2), THEA 427C(2), THEA 429(2), THEA 499 IL(9)

ADDITIONAL COURSES (3 credits)
Select 3 credits from: THEA 405 US(3), THEA 407W(3), THEA 408W(3), THEA 412(3)

SUPPORTING COURSES AND RELATED AREAS (6 credits)
Select 3 credits THEA or A&A and select 3 credits THEA, A&A, or General Elective

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.
[18] A grade of C or better per course is required for teacher certification.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-013D

Review Date: 1/10/2017

Advertising/Public Relations

*University Park, Donald P. Bellisario College of Communications (AD PR)
World Campus, Strategic Communications option only*

PROFESSOR FUYUAN SHEN, *Head, Department of Advertising/Public Relations*

This major is designed to provide a balance of theory, research, and practice. The course sequence provides professional skills courses in conjunction with applied theory and critical evaluative courses. Students develop an understanding of the role and effect of advertising and public relations within the business, social, and political arenas. Students develop abilities and skills that prepare them for a wide range of professional opportunities that include: media planning and relations, research, and client services. Analytical abilities are equally stressed throughout the curriculum. Critical thinking skills, creative problem-solving, and the need to justify decisions are developed. Theory and practice from a wide range of disciplines including business, behavioral sciences, and applied statistics are used to equip the students to make informed decisions in a dynamic environment.

ADVERTISING OPTION: All courses in the advertising major emphasize the critical importance of integrated communication. The objective of the curriculum is to prepare students for entry-level opportunities in the advertising profession and to prepare for eventual managerial roles where an understanding of integrated communication concepts is essential.

The program reflects an integrated marketing communications approach to the design implementation and evaluation of advertising messages. In addition to mastering the core professional courses, students are expected to have an understanding of the convergence of mass communication theory and practice and are encouraged to select from courses in communication theory, communication law, mass media history, ethics, and the impact of advertising and public relations on society.

PUBLIC RELATIONS OPTION: The public relations curriculum prepares students for the challenges of public relations practice in a highly competitive, technological, multicultural, and global environment. In their course of study, students study the role and function of public relations in building cooperative mutually beneficial relations between organizations and their constituent publics through understanding, credibility, and trust.

Students complete a core set of courses that includes news writing, introduction to public relations, public relations methods, mass communication research, and public relations problems (campaigns).

Because of the critical importance of journalistic writing skills and an understanding of news media ethics, public relations majors are encouraged to take additional journalism courses to fulfill their communication electives.

Advertising and public relations students are encouraged to choose a minor from outside the Bellisario College of Communications. The majority of majors select minors in business, English, sociology, psychology, political science, information systems and statistical analysis, foreign language, and speech communication.

STRATEGIC COMMUNICATIONS OPTION: This online program is designed to be only available to World Campus students.

Strategic communications refer to a group of techniques used to design, implement, and evaluate the impact of messages on selected groups of people. The goal is to find solutions to complex advertising and public relations problems in the corporate, non-profit, and government sectors at both the domestic and international level.

The Strategic Communications online option explores the theories, methods, and tools used to structure persuasive messages. The option includes an overview of strategic communications principles and concepts that sets the stage for more advanced studies. Students learn about research and analytic techniques used to design and implement effective communication campaigns that are delivered via traditional and new media options. The use of digital technology and social media is emphasized. The program examines the dynamics of the political, legal, social, and cultural environments that interact to define a communication task or problem. Students also learn techniques to benchmark and evaluate the effectiveness of strategic communications programs and understand how they apply to internal and external constituencies. Students studying strategic communications will refine their critical thinking skills and explore the nature and source of the information message content, medium of delivery, and the evaluation of the impact of the message on targeted groups.

An important aspect of the program is the examination of the ethical implications of strategic communication practices used in the marketing, advertising and public relations arena. Students will develop a framework that will help them to understand and evaluate supporters and critics of strategic communications practices.

Students must select at least 72 credits in courses outside the Bellisario College of Communications.

For the B.A. degree in Advertising/Public Relations, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(10 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 26 credits

BELLISARIO COLLEGE OF COMMUNICATIONS BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 35 credits [\[1\]](#)
(This includes 10 credits of General Education courses: 6 credits of GS courses; 4 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 14 credits

PRESCRIBED COURSES (11 credits)
COMM 160(1), ECON 102 GS(3), PSYCH 100 GS(3), STAT 200 GQ(4) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (3 credits)
Select 3 credits of COMM courses (other than COMM 100 GS or COMM 120) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 21 credits

ADVERTISING OPTION: (21 credits)

PRESCRIBED COURSES (15 credits)
COMM 320(3) (Sem: 3-6)
COMM 420(3), COMM 421W(3), COMM 422(3) (Sem: 5-7)
COMM 424(3) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

Select 6 credits from COMM 370(3), COMM 373(3), COMM 410 IL(3), COMM 411(3), COMM 417(3), COMM 418(3), COMM 425(3), COMM 426(3), COMM 427(3), COMM 468(3), COMM 494(1-6), COMM 496(3), COMM 499 IL(1-9) (Sem: 5-8)

PUBLIC RELATIONS OPTION: (21 credits)

PRESCRIBED COURSES (15 credits)

COMM 260W(3) (Sem: 3-4)
COMM 370(3) (Sem: 5-6)
COMM 420(3), COMM 471(3) (Sem: 5-8)
COMM 473(3) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

Select 6 credits from COMM 320(3), COMM 373(3), COMM 401(3), COMM 403(3), COMM 409(3), COMM 410 IL(3), COMM 417(3), COMM 418(3), COMM 425(3), COMM 426(3), COMM 427(3), COMM 462(3), COMM 464(3), COMM 468(3), COMM 494(1-6), COMM 496(3), or COMM 499 IL(1-9) (Sem: 5-8)

STRATEGIC COMMUNICATIONS OPTION: (21 credits)

PRESCRIBED COURSES (18 credits)

COMM 230(3), COMM 428A(3), COMM 428B(3), COMM 428C(3), COMM 428D(3), COMM 428E(3) (Sem: 1-8)

ADDITIONAL COURSES (3 credits)

Select 3 credits from CC 401(3), CC 402(3), CC 403(3), COMM 403(3), COMM 405(3), COMM 409(3), COMM 412(3), COMM 419 US;IL(3), or COMM 495(3) (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-03-014

Review Date: 11/19/2013

UCA Revision #1: 8/2/06

CM

Agricultural and Extension Education

University Park, College of Agricultural Sciences (AEE)

PROFESSOR JOHN C. EWING, Program Coordinator

This major helps prepare students for positions in education in agriculture, including schools and colleges, Cooperative Extension, business, trade and professional associations, and government agencies. The Department administers a program approved by the Pennsylvania Department of Education for the preparation of agriculture teachers in public school systems. This includes programs in agricultural production, mechanics, supplies, resources, products, forestry, horticulture, and other agricultural areas.

Students take courses in agricultural and natural resource sciences, leadership and communications, natural science, social science and general education. Students seeking teacher certification schedule professional courses in education and psychology.

Pennsylvania Teacher certification regulations require students to have a GPA of 3.0; satisfactorily complete any basic-skills or entrance testing requirements as specified by the Pennsylvania Department of Education in force at the time of application for entrance to the major; and complete an approved Educator Preparation Program. The Educator Preparation Program at Penn State includes documentation of at least 80 hours of volunteer or paid education work experience with learners of the age group the candidate plans to teach. At least 40 of these age-appropriate 80 hours must be with learners whose cultural, social, or ethnic backgrounds differ from the candidate's own; completion of an early field experience specified by the certification program; completion of at least 48 semester credit hours, including ENGL 15 or ENGL 30, 3 credits of literature, and 6 credits of quantification and secure occupational experience in the requested area of certification. (See also: [Teacher Education Programs](#))

For students seeking teacher certification, the B.S. degree in Agricultural and Extension Education, a minimum of 125-129 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(22 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin for additional information)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 2-3 credits

REQUIREMENTS FOR THE MAJOR: 99-104 credits

(This includes 22 credits of General Education courses: 22 for the teacher certification options--6 credits of GS courses; 9 credits of GN courses; 4 credits of GQ courses; 3 credits of GWS courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 79 credits

PRESCRIBED COURSES (72 credits)

AEE 100(3), AEE 295(1) [\[1\]](#), AEE 313(2) [\[1\]](#), AEE 412(4) [\[1\]](#) Sem: 1-2)

AGBM 101 GS(3), BIOL 110 GN(4), ENGL 202C GWS(3) (Sem: 3-4)

AEE 311(3), INTAG 100 GS;IL(3) (Sem: 5-6)

AEE 413(3) [\[1\]](#), ASTRO 1 GN(3), CHEM 101 GN(3), CHEM 202(3), EDPSY 14(3) [\[1\]](#), EDTHP 115 US(3) [\[1\]](#), PHYS 1 GN(3), STAT 200 GQ(4), SOILS 101 GN(3), WFED

413(3), WFED 414(3), WFED 450 US;IL(3) (Sem: 6-8)

AEE 349(3), AEE 350(3) (Sem: 7-8)

AEE 495(3) (Sem: 7-8)

ADDITIONAL COURSES (4 credits)

BIOL 220W GN(4), BIOL 230W GN(4), or BIOL 240W GN(4) (Sem: 2-7)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits of W courses offered in the College (Sem:1-7)

REQUIREMENTS FOR THE OPTION: 20-25 credits

ENVIRONMENTAL SCIENCE OPTION: (25 credits)

PRESCRIBED COURSES (7 credits)

AGRO 28(3), ANSC 201(4) (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 3 credits in biological, physical ecosystems (Sem: 1-7)

Select 6 credits in environmental impact management (Sem: 1-7)

Select 6 credits in environmental learning (Sem: 1-7)

Select 3 credits in social, political, and legal aspects of environmental science (Sem: 1-7)

PRODUCTION OPTION: (20 credits)

SUPPORTING COURSES AND RELATED AREAS (20 credits)

Select 8 credits in agriculture (Sem: 1-7)

Select 6 credits in animal science (Sem: 1-7)

Select 6 credits in plant/soil science (Sem: 1-7)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-004

Review Date: 01/10/2017

R & T: 01/14/2014

UCA Revision #1: 8/2/06

AG

Aerospace Engineering

University Park, College of Engineering (AERSP)

PROFESSOR AMY PRITCHETT, Head, Department of Aerospace Engineering

This major emphasizes the analysis, design, and operation of aircraft and spacecraft. Students learn the theories and practices in the fundamental subjects of aeronautics, astronautics, aerodynamics and fluid dynamics, aerospace materials and structures, dynamics and automatic control, aircraft stability and control and/or orbital and attitude dynamics and control, air-breathing and rocket propulsion, aircraft systems design and /or spacecraft systems design. All of these place significant weight on the development and use of teamwork and communications skills for effective problem-solving. Graduates in aerospace engineering find employment in the customary settings such as government laboratories, large and small aerospace firms, and in nontraditional positions that also require the use of systems-engineering approaches to problem-solving; they can also pursue graduate study in aerospace engineering and related fields.

Program Educational Objectives:

Two to three years after obtaining a B.S. in aerospace engineering, graduates will be

1. employed in the customary settings such as government laboratories, large and small aerospace firms, and nontraditional positions that also require the use of systems engineering approaches to problems-solving, or
2. pursuing graduate study in aerospace engineering and related fields.

Program Outcomes (Student Outcomes)

The undergraduate program will provide students with the

- a.) ability to apply knowledge of mathematics, science and engineering to foundational subjects of aerospace engineering (aeronautics, astronautics, aerodynamics and fluid dynamics, aerospace materials and structures, dynamics and automatic control, stability and control of aircraft and/or spacecraft, air-breathing and rocket propulsion, and aircraft systems design and/or spacecraft systems design),
- b.) ability to design and conduct experiments, analyze and interpret data in aerodynamics, propulsion, structures, or control systems,
- c.) ability to design a system, component or process, integrating knowledge from relevant topics in astronautics and aeronautics, to meet desired needs in aircraft systems and/or in spacecraft systems,
- d.) ability to function on multi-disciplinary teams,
- e.) ability to identify, formulate, and solve engineering problems,
- f.) understanding of professional and ethical responsibility,
- g.) ability to communicate effectively,
- h.) broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context,
- i.) recognition of the need for, and an ability to engage in life-long learning,
- j.) knowledge of contemporary issues,
- k.) ability to use the techniques, skills, and modern engineering tools necessary for engineering practice, and
- l.) knowledge in all subjects in Category I or in Category II, and in some subjects in the other category:

(Category I: aerodynamics, aerospace materials, structures, propulsion, flight mechanics, and stability and control),

(Category II: orbital mechanics, space environment, attitude determination and control, telecommunications, space structures, and rocket propulsion).

The first two years of study are similar to those in other engineering majors and provide students with a basic education for the engineering profession. Students need to complete E MCH 212, CMPSC 201, MATH 220, MATH 230, and MATH 250 prior to the start of the junior year in order to meet graduation requirements in the following two years. Six of the nine technical-elective credits taken in the senior year must be aerospace engineering courses.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHSY 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Aerospace Engineering, a minimum of 131 credits is required. This baccalaureate program in Aerospace Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 113 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (72 credits)

CHEM 110 GN(3) [\[1\]](#), EDSGN 100(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#) (Sem: 1-2)
EMCH 212(3) [\[1\]](#), ME 201(3), MATH 220 GQ(2-3), MATH 230(4), MATH 250(3) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#), PHYS 214 GN(2) (Sem: 3-4)
AERSP 301(3) [\[1\]](#), AERSP 304(3), AERSP 305(3), AERSP 306(3) [\[1\]](#), AERSP 309(3) [\[1\]](#), AERSP 311(3) [\[1\]](#), AERSP 312(3), AERSP 313(3) [\[1\]](#), EMCH 315(2), EMCH 316(1) (Sem: 5-6)
AERSP 410(3), ENGL 202C GWS(3) (Sem: 7-8)

ADDITIONAL COURSES (29 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
ECON 102 GS(3), ECON 104 GS(3), or ECON 014 GS(3) (Sem: 1-2)
Select 5 credits from EMCH 210(5), EMCH 211(3), EMCH 213(3) (Sem: 3-4)
ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)

CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 3-4)
AERSP 401A(3), AERSP 401B(2); or AERSP 402A(3), AERSP 402B(2) (Sem: 7-8)
AERSP 413(3) or AERSP 450(3) (Sem: 7-8)
AERSP 440(3), EE 210(3), or EE 212(4) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 9 credits of Aerospace Technical Elective (ATE) courses from department list. (Sem: 7-8)

Select 3 credits of Limited Elective (LE) courses from department list. (Sem: 7-8)

(Students who complete Basic ROTC may substitute 6 of the ROTC credits for 3 credits of LE and 3 credits of GHA.)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2006

Blue Sheet Item #: 34-05-056

Review Date: 2/28/06

R & T: Approved 5/24/2013

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

EN

African American Studies

University Park, College of the Liberal Arts (AA ST)

PROFESSOR CYNTHIA A. YOUNG, Head

This major helps students achieve a critical understanding of the forms of knowledge, culture, and social organization that African-Americans have produced, and of the social conditions that have supported and constrained this work. Using interdisciplinary approaches as well as methods drawn from the traditional disciplines, the major exposes students to the ideas, institutions, movements, and practices that African-American peoples have used to survive and shape the modern world. The African American Studies curriculum promotes the critical faculties, cultural competencies, and historical sensibilities of its students, and thereby equips them for success in graduate school, professional school, and the workplace.

For the B.A. degree in African American Studies, a minimum of 125 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(4-10 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in the this bulletin)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 23-29 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits [\[1\]](#)

(This includes 3-9 credits of General Education courses: 0-6 credits of GS courses; and 3 credits of GH courses)

PRESCRIBED COURSES (9 credits)

AFAM 100 GS;US(3), AFAM 197 GS; IL(3), HIST 152 GH;US;IL(3) (Sem: 1-4)

ADDITIONAL COURSES (27 credits)

Select 3 credits from AFAM 101 GH;US(3), AFAM 102 GH;US(3), AFAM 103 GH;US(3) (Sem: 1-4)

Select 3 credits from AFAM 197 GH;US(3) or SOC 207 (3) (recommended for Political Science, Sociology and HHD-related double majors) (Sem: 1-4)

Select 3 credits from AFAM 401(3), AFAM 494(3), AFAM 495(3) (Sem: 4-8)

Select 12 credits from one of the following four areas of concentration, and 6 more credits from any of the other areas. A minimum of 12 credits should be AFAM courses, and at least 12 of these credits must be at the 400-level or above.

If you wish to receive credit for courses other than the ones noted below, you must seek permission from the AFAM undergraduate director.

1. Gender and Sexuality

AFAM 101 GH;US(3), AFAM 102 GH;US(3), AFAM 103 GH;US(3); AFR 202 GS;IL(3) (Sem: 1-4)

AFAM 364 GS;US(3), AFAM 410(3), AFAM 416(3) (Sem: 4-8)

Select 3 credits at the 400-level in consultation with your adviser (Sem: 4-8)

2. Humanities

AFAM 147 GH;US(3), AFAM 145 GH;US;IL(3), AFAM 146 GH;US(3), AFAM 208 GA;US;IL(3), AFAM 210 GH;US(3), AFAM 212 US(3), AFAM 235 US(3) (Sem: 1-4)

AFAM 412(3), AFAM 422(3), AFAM 460(3), AFAM 465(3), AFAM 469(3) (Sem: 4-8)

3. Social Sciences and Community Development

SOC 119 GS;US(3), PLSC 123 GS;US;IL(3) (Sem: 1-4)

AFAM 302 US(3), AFAM 409(3), AFAM 431(3), AFAM 432(3), AFAM 445Y(3), AFR 459(3), ECON 436W US(3), EDTHP 411(3), PLSC 490(3) (Sem: 4-8)

4. Migration and Diaspora

AFAM 102 GH;US(3), AFAM 132 IL(3), AFAM 211 GH;US;IL(3), AFAM 250 GH;IL(3), AFR 110 GS;IL(3), AFR 192 GH;IL(3) (Sem: 1-4)

AFAM 431(3), AFAM 432(3), AFR 440(3), AFR 497(3), PLSC 453(3) (Sem 4-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-05-039

Review Date: 02/21/2012

African Studies

University Park, College of the Liberal Arts (AFRST)

PROFESSOR WILLIAM J. DEWEY, *Director*

The major in African studies is a multidisciplinary program designed to offer students the opportunity to develop their understanding of various aspects of the African continent, including its socioeconomic conditions and global relations. The program utilizes historical, cultural, geographical, economic, and political approaches to equip students with skills to undertake research on issues pertinent to Africa and to prepare themselves for careers in a range of professions as well for post-graduate studies.

For the B.A. degree in African Studies, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-9 credits of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 9-18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 45 credits^[1]

(This includes 0-9 credits of General Education courses; 3 credits of GA courses; 3 credits of GS courses; and 3 credits of GH courses)

PRESCRIBED COURSES (12 credits)

AFR 105 GN;IL(3), AFR 110 GS;IL(3), AFR 191 GH;IL(3), AFR 192 GH;IL(3) (Sem: 1-4)

ADDITIONAL COURSES (33 credits)

Select 15 credits from the following (100-300 level courses): AFR 150 GH;IL(3), AFR 197(3), AFR 199 IL(3), AFR 202 GS;IL(3); AFR 294(3-6), AFR 297(3-6); AFR 299 IL(3-6), AFAM 302 US(3), AFR 395(3), AFR 399(3), AFAM 100 GS;US(3), AFAM 211 GH;US;IL(3), ARTH 335 GA;IL(3), ECON 102 GS(3), ECON 104 GS(3) (Sem: 1-4)

Select 18 credits with at least 12 from AFR or AFR cross-listed courses: AFR 403 IL(3), AFR 405(3), AFR/PLSC 434(3), AFR/PLSC/IB 440(3), AFR/PLSC 443 IL(3), AFR/PLSC 454 IL(3), AFR/PLSC 459 IL(3), AFR 464 IL(3), AFR 494(3), AFR 495(3), AFR 496(3), AFR 497(3), AFR 499 IL(3), GEOG 436(3), GEOG 444(3), GEOG/LER 475(3), PLSC 481(3) (Sem: 5-8)

^[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-05-040

Review Date: 02/21/2012

Agribusiness Management

University Park, College of Agricultural Sciences (AG BM)
University Park, The Smeal College of Business
World Campus

PROFESSOR DAVID ABLER, Program Coordinator

Graduates can be found working in the food production, processing, financial services, wholesaling and retailing industries, both in the United States and abroad. A substantial number are employed by agricultural supply firms. Typically, B.S. degree holders begin their careers in sales or as management trainees, and then progress to management as they develop higher levels of expertise and experience. Penn State Agribusiness Management graduates chose careers in many other places. They also are employed in banking and the investment and mutual funds industries, and others have gone to law school, graduate school, or into rural development. The quality and diversity of the program enables Agribusiness majors to undertake a variety of jobs.

This major, which is offered jointly with The Mary Jean and Frank P. Smeal College of Business, includes a core of courses required of all business students. Combining the required specialization area with a minor or electives also allows a student to focus on a particular area of interest.

For the B.S. degree in Agribusiness Management, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 6-9 credits

REQUIREMENTS FOR THE MAJOR: 81- 84 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (43 credits)

AGBM 102(3)[\[1\]](#), AGBM 106(3)[\[1\]](#), ECON 104 GS(3) (Sem: 1-4)

ACCTG 211(4), AGBM 302(3)[\[1\]](#), AGBM 308(3)[\[1\]](#), AGBM 320(3)[\[1\]](#), AGBM 338 IL(3), ENGL 202D GWS(3), MIS 204(3), FIN 301(3), SCM 301(3), MKTG 301(3), MGMT 301(3) (Sem: 5-6)

ADDITIONAL COURSES (26-29 credits)

AGBM 101 GS(3)[\[1\]](#) or ECON 102 GS(3)[\[1\]](#) (Sem: 1-4)[\[77\]](#)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 3-4)

RSOC 11 GS(3) or SOC 1 GS(3) (Sem: 3-6)[\[78\]](#)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

AGBM 407(3) or AGBM 408(3) (Sem: 5-8)

Take 3-6 credits in Social, Ethical and Legal Environment of Business from the following: BA 243(4); BLAW 341(3) and BA 342(3); BLAW 243(3) (Sem: 2-6)

Take 6 credits of 400-level AGBM courses (excluding, unless approved by the AGBM program, AGBM 495A, AGBM 495B, and AGBM 496).

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits in a specialty area, in consultation with an adviser (at least 6 of these credits must be at the 300 or 400 level) (Sem: 5-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[\[77\]](#) AG BM 101 required unless ECON 102 was taken before entering the AGBM major.

[\[78\]](#) R SOC 011 required unless SOC 001 was taken before entering the AGBM major.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-003

Review Date: 1/10/2017

UCA Revision #1: 8/2/06

AG/BA

Agricultural Science

University Park, College of Agricultural Sciences (AG SC)

PROFESSOR JOHN C. EWING, *Program Coordinator*

This major enables students to develop programs of study to serve their individual needs by assembling courses selected from various departments within the College of Agricultural Sciences. The student develops either a broad background in agriculture or a special program of study not currently offered within departments of the college. Students are expected to focus study on one or more disciplines of the agricultural sciences by selecting a minor from the approved list of minors offered by the College of Agricultural Sciences. The student, in consultation with an adviser, is given considerable flexibility for selecting courses to satisfy individual interests and aspirations.

Students can prepare themselves for careers in agricultural and natural resource related sales, and /or public relations; food, agricultural and natural resource commodity groups, agricultural finance; governmental and conservation agencies; the Cooperative Extension Service; land use and appraisal; and international agriculture agencies.

For the B.S. degree in Agricultural Science, a minimum of 123 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18-30 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 6-26 credits

REQUIREMENTS FOR THE MAJOR: 82-90 credits

(This includes 18-30 credits of General Education courses: 0-3 credits of GA courses; 0-3 credits of GHA courses; 9 credits of GN courses; 0-6 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (12 credits)

CAS 100 GWS(3), ENGL 015 GWS(3) (Sem: 1-2)

AEE 360(3), AEE 460(3) (Sem: 5-8)

ADDITIONAL COURSES (43-48 credits)

BIOL 011 GN(3) and BIOL 012 GN(1), or BIOL 110 GN(4) or BISC 003 GN(3) (Sem: 1-2)

CHEM 101 GN(3) or CHEM 110 GN(3) (Sem: 1-4)

Select 3 credits from ENGL 202C GWS(3), ENGL 202D GWS(3) (Sem: 3-4)

Select 3 credits from AEE 330(3), AEE 440(3) (Sem: 4-7)

Select 3-4 credits in Crop Management: Any AGECO except X95 and X96, Any AGRO except X95, X96, Any ENT except X95, X96 (Sem: 5-6)

Select 3 credits in any HORT except X95, X96 (Sem: 5-6)

Select 3 credits in Agricultural Economics and Rural Sociology: Any AGBM except X95 and X96, Any CED except X95, X96, Any RSOC (Sem: 5-6)

Select 3 credits in International Agriculture: AEE 400(3), CED 450 IL(3), INTAG 100 GS;IL(3), INTAG 481(3), Any College of Agricultural Sciences international course (Sem: 5-6)

Take 1-2 credits in Careers in Agriculture: AEE 100(2), AG 100(1), AG 113(1), ANSC 290(1), ERM 151(1) (Sem: 5-6)

Select 3-4 credits in any ANSC except 291, X95, X96 (Sem: 5-6)

Select 3 credits in Technology in Agriculture: PLANT 217(3), AGECO 144 GN(3), AGECO 457(3); ANSC 207(2) and ANSC 208(1); , ERM 210 GN(3), FDSC 200(3) (Sem: 5-6)

Select 6 credits in Natural Resources/Ecology: from AGECO 122 GN(3), AGECO 201(3), EGEE 101 GN(3), FOR 470(3), SOILS 71 GN;IL(3), SOILS 101 GN(3), SOILS 412W(3), WFS 209 GN(3) (Sem: 5-6)

Select 3 credits from AEE 311(3) or AEE 465(3) (Sem: 5-8)

Select 3 credits in Agricultural and Environmental Policy: AG 160 GH(3), AGECO 134 GN(3), CED 201(3), FDSC 105 GHA(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (27-30 credits)

Select 9 credits in Agriculture (Sem: 5-8)

Select 18-21 credits for College of Agricultural Sciences Minor [\[11\]](#) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-06-002

Review Date: 04/12/2011

UCA Revision #1: 8/2/06

AG

Air Force Aerospace Studies (AIR)

The Air Force ROTC program trains qualified young men and women for service as commissioned officers in the United States Air Force.

The program is offered at the University Park campus and by special arrangement as follows: students attending Penn State Worthington Scranton, Penn State Hazleton, or Penn State Wilkes-Barre may complete freshman and sophomore requirements at Wilkes College, Wilkes-Barre, Pa.; students attending Penn State Abington or Penn State Brandywine may complete freshman and sophomore requirements at St. Joseph's University, Philadelphia, Pa.; students attending Penn State Altoona may complete freshman and sophomore requirements at the University Park campus. The junior and senior requirements may then be completed upon relocation to University Park campus.

Four-, three-, two-, and one-year (limited) scholarships are available to selected applicants. These scholarships provide \$250-\$400 per month along with full tuition and textbook allowance. Also, all cadets in the junior and senior courses are paid at the rate of \$350 to \$400 per month (tax free), respectively, even if not on scholarship. Uniforms and ROTC textbooks are provided for free by the Air Force.

COURSE -- The instruction consists of a General Military Course (freshmen and sophomores) and a Professional Officer Course (juniors and seniors) of four semesters each. Subjects and credits appear under course descriptions (ROTC) in this bulletin. Students have an opportunity to visit Air Force bases throughout the school year and summer months, where they may receive instruction on parachuting, flying gliders, and other Air Force-related activities.

Completion of eight semesters and one four-week summer training period confers eligibility for a commission in the Air Force Reserve and assignment to active duty in the USAF with the rank of second lieutenant. For students graduating in fewer than four years, there is also a two-year program in which a six-week summer training period replaces both the General Military Course and the normal four-week summer training period. Those students not participating in the four-year program but who will have four or more full academic semesters available, either undergraduate or graduate, after completion of the six-week summer training period are eligible for this two-year program, which leads to an Air Force commission.

Effective Date: Current

Review Date: 4/19/04

American Studies

Abington College (AMSAB)
Penn State Harrisburg (AMSCA)
University College (AMSCC): Penn State Brandywine

PROFESSOR JOHN HADDAD, *Program Coordinator*

This interdisciplinary major is designed to provide students with an integrated and critical knowledge of American culture, drawing on courses in American Studies and in the traditional disciplines and culminating in two senior seminars. A number of interests may be pursued within the major, including popular culture, art, technology, business, law, archives, museology, and conservation. The major helps prepare students for careers in business, teaching, government, and a number of other areas, and for enrollment in law and other professional programs.

For entrance into the major, the following must be met:

1. At the end of the sophomore year, any student in good standing may gain entrance into the major without having completed specific courses.
2. Any student seeking entrance during the fifth semester will be granted entrance at the discretion of the American Studies Committee and/or Director following evaluation of the student's record.
3. Any student seeking entrance during or after the sixth semester will be expected to have completed at least 12 credits, which may be counted toward the major in American Studies.

For the B.A. degree in American Studies, a minimum of 123 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 21 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 33 credits [\[1\]](#)

PRESCRIBED COURSES (6 credits)
AMST 491W(6) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)
AMST 100 GH(3) or AMST 100Y GH(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (24 credits)
(Include 12 credits at the 400 level distributed in at least two of the areas.)
Select 9 credits in each of two of the following areas; select 6 credits in one other of the areas: (Sem: 3-8)

- a. American literature
- b. American history
- c. American art, philosophy, and religion (humanities)
- d. American social sciences

Integrated B.A./M.A. in American Studies

The American Studies Program offers an integrated B.A./M.A. program that is designed to allow academically superior baccalaureate students enrolled in the American Studies major to obtain both the B.A. and the M.A. degrees in American Studies within five years of study. The first two years of undergraduate coursework typically include the University General Education requirements and lower-level courses. In the third year, students typically take upper-division coursework in American Studies and define areas of interest. The fourth year involves graduate-level American Studies coursework including required courses in American Studies Theory and Methods (AMST 500). The fifth and final year of the program typically consists of graduate coursework in American Studies including Seminar (AMST 591) and identification of a research project that will culminate in the completion of a M.A. project (AMST 580) or thesis (AMST 600).

By encouraging greater depth and focus in the course of study beginning in the third undergraduate year, this program will help the student more clearly define his/her area of interest and expertise in the broad field of American Studies. As a result, long-range academic planning for exceptional students pursuing doctoral degrees or other professional goals after leaving Penn State will be greatly enhanced. For most students, the total time required to reach completion of the higher degree will be shortened by about a year. The student will have earlier contact with the rigors of graduate study and with graduate faculty. The resources of the Graduate School are accessible to students accepted into the IUG program. Students in their third and fourth year of study with IUG status benefit from their association with graduate students whose level of work parallel their own.

For the IUG American Studies B.A./M.A. degree, a minimum of 123 credits are required for the B.A. and a minimum of 30–33 credits for the M.A. (30 for non-thesis; 33 for thesis). Twelve credits at the 400 level or higher, in consultation with the adviser, can apply to both the B.A. and M.A. degrees; at least 6 of these 12 credits must be at the 500 level.

If for any reason a student admitted to the B.A./M.A. program is unable to complete the requirement for the Master of Arts degree program in American Studies, the student will be permitted to receive the B.A. degree assuming all degree requirements have been satisfactorily completed.

Admission Requirements

The number of openings in the integrated B.A./M.A. program is limited. Admission will be selective based on specific criteria and the unqualified recommendation of faculty. Applicants to the integrated program:

1. Must be enrolled in the American Studies B.A. program and meet the admission requirements of the American Studies M.A. program.
2. Must apply and be admitted to the Graduate School.
3. Shall be admitted no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study.
4. Must have completed at least one 400-level American Studies course (AMST prefix) with a grade of A.
5. Must submit transcript(s) of previous undergraduate work, recommendations from two faculty members, writing sample, and statement of goals.
6. Must have an overall GPA at or above 3.3 (on a 4.0 scale) in undergraduate coursework and a GPA at or above 3.5 in all coursework completed for the American Studies major.
7. Must present a plan of study approved by the student's adviser in the application process.

Course Load

As many as 12 of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. The courses to be

double counted are:

AMST 491W (two seminars on different topics)—6 credits during the student's fourth (senior) year

AMST 500 —3 credits during the student's fourth (senior) year

AMST 591 —3 credits during the student's fifth year

With the approval of the student's adviser, students may take American Studies courses from the 100 to 400 levels at Penn State campuses other than Harrisburg, but 500-level courses must be taken at the Harrisburg campus.

Sample Sequence of Coursework

A typical sequence of coursework for the integrated program would appear as follows (AM ST 491W, AM ST 500, and AM ST 591 are applied to both undergraduate and graduate degree programs):

YEAR	FALL		SPRING	
3rd (Junior)	AMST 100	3	AMST supporting course	3
	AMST supporting course	3	400-level AMST course	3
	BA Requirement: Other Cultures	3	400-level AMST course	3
	BA Requirement: Knowledge Domain	3	Elective	3
	Elective	3	Elective	3
	Total	15	Total	15
4th (Senior)	AMST 491W*	3	AMST 491W*	3
	400-level AMST course	3	400 level AMST course	3
	400-level AMST supporting course	3	AMST 500*	3
	Elective	3	500 level AMST course	3
	Elective	3	Elective	3
	Total	15	Total	15
5th (Graduate)	500-level AMST course	3	500-level AMST course	3
	500-level AMST course	3	AMST 580 or AMST 600	3 - 6
	500-level AMST course	3	AMST 591*	3
	Total	9	Total	9 - 12

*Satisfies requirements for both the undergraduate and graduate program for a total of 12 credits

As stated in the Graduate Bulletin, a minimum grade-point average of 3.00 for work done at the University is required for graduation and to maintain good academic standing. See http://bulletins.psu.edu/bulletins/whitebook/degree_requirements.cfm?section=masters.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-026

Review Date: 08/20/13

UCA Revision #2: 7/26/07

AB

**Integrated B.S. in Animal Science and Master of Biotechnology in Biotechnology CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS
Begin Date of Enrollment Hold: March 8, 2018**

Animal Science

University Park, College of Agricultural Sciences (AN SC)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

DR. ROBERT MIKESSELL, *Program Coordinator*

Animal Science may be defined as the study and integration of all disciplines that relate to the function and care of animals for the benefit of society by providing companionship, food, fiber, performance, and research. The Animal Science major includes references to all types of animals.

The educational experiences included in this major should prepare the student for a wide range of entry-level positions in production agriculture, agribusiness, and related industries, and provide preparation for the pursuit of post-baccalaureate studies leading to professional or advanced degrees. The student is expected to develop a comprehensive understanding of the biological and physical sciences underlying the functioning of all types of animals.

Realizing the wide range of career possibilities requiring diverse types of academic preparation, two options of study are available: the Business/Management Option and the Science Option.

For the B. S. degree in Animal Science, a minimum of 124 credits is required.

BUSINESS/MANAGEMENT OPTION: The primary objective of this option is to prepare the student for entry-level positions in agribusiness organizations and in the animal and food industries. The student may develop a program with specie specialization or diversity. The student may develop a foundation in accounting, economics, finance, marketing, and other business-related areas. Graduates seek entry-level employment opportunities as loan officers with financial institutions; technical service and sales representatives for pharmaceutical, agri-chemical, feed or food producing companies; field representatives for breed organizations or producer cooperatives; public relations and human resources personnel for agribusiness companies; management trainees for numerous agribusiness firms; management trainees or assistant managers of animal production units, and roles in government agencies.

SCIENCE OPTION: The primary objective of this option is to prepare the student for entry into post-baccalaureate study programs in animal and related biological sciences. Graduates who have obtained the proper qualifications may pursue advanced studies in a wide variety of disciplines, including animal science, biotechnology, genetics, microbiology, nutrition, physiology, molecular biology, pharmaceutical research, and veterinary medicine. Graduates not desiring to pursue advanced studies seek entry-level employment opportunities as research technicians, technical service representatives for various industrial companies, food inspectors, laboratory animal caretakers, and public relations personnel.

TO VIEW THE [Animal Science Minor \(AN SC\)](#)

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(18-24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-13 credits

REQUIREMENTS FOR THE MAJOR: 90-100 credits
(This includes 18-24 credits of General Education courses: 0-3 credits of GA courses; 9 credits of GN courses; 3-6 credits of GS courses; 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 42-47 credits
(Courses taken as common requirements can not be used to meet requirements within the option)

PRESCRIBED COURSES (24 credits)
ANSC 100 GN(3) (Sem: 1-2)
BIOL 110 GN(4) (Sem: 1-4)
ANSC 201(4) [11](#), ANSC 207(2) [11](#), ANSC 208(1) [11](#), ANSC 290(1), ANSC 300 GN(3) [11](#) (Sem: 3-4)
ANSC 301(3) [11](#), BMB 211(3) (Sem: 3-6)

ADDITIONAL COURSES (15-18 credits)
AGBM 101 GS(3) or ECON 102 GS(3) (Sem: 1-2)
Select 6-8 credits from:
-- select 3-4 from MATH 021 GQ(3), MATH 022 GQ(3), MATH 110 GQ(4), or MATH 140 GQ(4) (Sem: 1-2)
-- select 2-4 from CMPSC 101 GQ(3), CMPSC 203 GQ(4), MATH 022 GQ(3), MATH 111 GQ(2), MATH 141 GQ(4), STAT 100 GQ(3), STAT 200 GQ(4), or STAT 250 GQ(3) (Sem: 1-2)
CHEM 202(3) or CHEM 210(3)
Select 3-4 credits [11](#) from ANSC 305(3), ANSC 306(3), ANSC 308(4), ANSC 309(4), ANSC 310(3), ANSC 311(4), ANSC 315(3), ANSC 324(3), or ANSC 327(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (3-5 credits)
Select 3-5 credits in communication skills courses from department list. Certain courses may double count as general education courses; consult with your adviser. (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 48-53 credits

BUSINESS/MANAGEMENT OPTION: (49-52 credits)

PRESCRIBED COURSES (7 credits)
ACCTG 211(4) (Sem: 3-4)
ANSC 322(3) (Sem: 5-6)

ADDITIONAL COURSES (19-22 credits)
CHEM 101 GN(3) or CHEM 110 GN(3) (Sem: 1-2)
AGBM 102(3) or MKTG 221(3) (Sem: 3-4)
AGBM 200(3) or MGMT 100(3) (Sem: 3-4)
MICRB 106 GN(3) and MICRB 107 GN(1); or MICRB 201(3) and MICRB 202(2) (Sem: 5-6)
Select 3-4 credits from ANSC 305(3), ANSC 306(3), ANSC 308(4), ANSC 309(4), ANSC 310(3), ANSC 311(4), ANSC 315(3), ANSC 324(3), ANSC 327(3), ANSC 405(3), ANSC 407(3), or ANSC 410(4) (Sem: 5-8)
Select 3-4 credits from ANSC 420(4), ANSC 423(3), ANSC 427(3), or ANSC 431(4) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (23 credits)

Select 23 credits (at least 9 credits of business and 9 credits of production courses; 12 credits must be 400-level courses) from department list (Sem: 5-8)
(Students may apply 6 credits of ROTC.)

SCIENCE OPTION: (48-53 credits)**PRESCRIBED COURSES** (27 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-2)

BMB 212(1), BMB 221(2) (Sem: 5-6)

MICRB 201(3), MICRB 202(2), PHYS 250 GN(4) (Sem: 5-6)

ANSC 423(3), ANSC 431(4) (Sem: 7-8)

ADDITIONAL COURSES (16-19 credits)

CHEM 203(3) or CHEM 212(3) and CHEM 213(2) (Sem: 3-4)

Select 4 credits from BIOL 220W GN(4), BIOL 230W GN(4), or BIOL 240W GN(4) (Sem: 3-4)

Select 3 credits from AGRO 028(3), ANSC 211(3), ANSC 213(3), or SOILS 101 GN(3) (Sem: 5-6)

Select 3 credits from ANSC 322(3), BIOL 133 GN(3), or BIOL 222(3) (Sem: 5-6)

Select 3-4 credits from ANSC 305(3), ANSC 306(3), ANSC 308(4), ANSC 309(4), ANSC 310(3), ANSC 311(4), ANSC 315(3), ANSC 324(3), ANSC 327(3), ANSC 405(3), ANSC 407(3), ANSC 410(4), or ANSC 413(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (5-7 credits)

Select 5-7 credits of 400-level courses from department list

(Students may apply 6 credits of ROTC.) (Sem: 7-8)

Integrated B.S. in Animal Science and Master of Biotechnology in Biotechnology

Qualified students should formally apply to the Master of Biotechnology degree when they have earned a minimum of 75 credits in their B.S. curriculum. To make sure students finish within the shortest time-to-degree, students intending to apply to the integrated program will be closely mentored by their respective undergraduate program coordinators to guide their progress through their B.S. curriculum. The undergraduate program coordinators will be directly consulted by the Director of the Master of Biotechnology in Biotechnology program regarding admission of a student applicant to the Master of Biotechnology in Biotechnology program.

Students admitted to the integrated program will follow their undergraduate curriculum until the beginning of their fourth year, at which time, they start taking courses required for the Master of Biotechnology degree. In the summer following the Spring semester of their fourth year, students will participate in off-campus internships and have the option of either continuing at their off-campus location for their research project in the following Fall semester, or coming back to campus to do a research project. The final Spring semester will be devoted to completing the course and credit requirements for the Master of Biotechnology degree. As designed, students can opt to graduate with a B.S. degree at the end of the Spring semester of their 4th year, when they should have completed the credit requirements of the B.S. degree program (124 credits). The following table outlines the program of study for students in this program:

Year	Semester	B.S. Animal Science (124 credits required) credits completed
<u>I</u>	<u>Fall</u>	<u>15</u>
	<u>Spring</u>	<u>16</u>
<u>II</u>	<u>Fall</u>	<u>15.5</u>
	<u>Spring</u>	<u>16</u>
<u>III</u>	<u>Fall</u>	<u>15</u>
	<u>Spring</u>	<u>15.5</u>
<u>IV</u>	<u>Fall</u>	<u>15*</u>
	<u>Spring</u>	<u>16*</u>
Total credits for B.S.		124

* The following courses to be taken in these semesters will be cross-counted towards the B.S. and Master of Biotechnology. degrees:

BIOTC 479. Methods in Biofermentation OR CH E 409 (3 credits)

BMB 400. Molecular Biology of the Gene (2-3 credits)

MCIBS 571. Current Issues in Biotechnology (2 credits)

MCIBS 591. Ethics in the Life Sciences (1 credit)

MCIBS 593. Molecular Biology Laboratory (3 credits)

Total credits cross-counted

in B.S. and Master of Biotechnology degrees 12 credits, 6 of which are 500-level credits

Master of Biotechnology in Biotechnology (30 credits required, 18 of which must be 500-level)

IV	Summer	MCIBS595 or equivalent in AN SC (2 credits) Internship
V	Fall	MCIBS 594. Research Project (3-6 credits)

Spring

MCIBS 590. Colloquium (1 credit)
Electives, 500-level (3-6 credits)
Other graduate level electives (6 credits)

Minimum total credits earned for Summer and 5th year

18 credits, at least 12 of which are 500-level credits

Admission Requirements

Students must have a GPA of 3.5 at the time of application to the integrated degree program when they have completed at least 75 credits of their B.S. curriculum. The GRE scores normally required in the Master of Biotechnology in Biotechnology program will be waived for applicants to the integrated B.S.-Master of Biotechnology degree.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013 (ANSCI); Summer Session 2006 (Integrated B.S./Master of Biotechnology in Biotechnology-Grad. Degree Name Change)

Blue Sheet Item #: 41-04-001 (ANSC); 34-06-001 (Integrated B.S./Master of Biotechnology in Biotechnology)

Last Revised by the Department: Fall Semester 2012

Review Date: 01/15/2013

AG

Anthropology

University Park, College of the Liberal Arts (ANTH)

PROFESSOR DOUGLAS J. KENNETT, *Head, Department of Anthropology*

Anthropology is a holistic scientific discipline having links to the humanities. Anthropologists document, describe, and explain the physical and cultural differences of societies, both past and present. Anthropology sees the individual as part of a larger social order that both impinges upon and is molded by those who belong to it. Anthropology investigates how cultures interact and relate within specific economic, political, and ecological frameworks over time.

The Bachelor of Arts major focuses on the biological and cultural variations of human populations through archaeology, biological anthropology, and cultural anthropology. In addition to class work, students receive practical training in laboratory and field work.

For the B.A. degree in Anthropology, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR.)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selections, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 12 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 43 credits^[1]

(This includes 4 credits of General Education GQ courses.)

PRESCRIBED COURSES (13 credits)

ANTH 002 GS(3), ANTH 021 GN(3), ANTH 045 GS;US;IL(3) , STAT 200 GQ(4) (Sem: 1-6)

ADDITIONAL COURSES (30 credits)

Select 15 credits in ANTH courses other than ANTH 001 GS;US;IL(3) (no more than 6 credits from 190-199, 290-299, 390-399, and 490-499, other than 297 and 497) (Sem: 1-8)

Select 15 credits from the following ranges (at least 3 credits must be in each range):

- a. Archaeology: ANTH 420-439 (Sem: 3-6)
- b. Biological anthropology: ANTH 400-419, ANTH 460-473 (Sem: 3-6)
- c. Cultural anthropology: ANTH 440-459, ANTH 474-479 (Sem: 3-6)

Integrated B.A./M.A in Anthropology Degree Requirements

The Department of Anthropology offers an integrated B.A./B.S./M.A. (IUG) program designed to allow academically superior students to obtain a B.A. or B.S. degree in Anthropology, a B.A. degree in Classics and Ancient Mediterranean Studies (CAMS), and a M.A. degree in Anthropology in five years of study. To complete the program in five years, students interested in the Integrated Undergraduate and Graduate degree in Anthropology must apply for admission to the Graduate School and the Integrated B.S./M.S. Program by the end of their junior year.

During the first three years, the student will follow course scheduling for the B.A. degree in CAMS and either the B.A. degree in Anthropology or the B.S. degree in Archaeological Science (see the Undergraduate *Bulletin*). Students who intend to enter the IUG program are encouraged to take upper level classes during their first three years whenever appropriate. By the end of the junior year, students normally apply for admission to both the IUG program and to the Graduate School. Acceptance decisions will be made prior to the beginning of the senior year and M.A. advisors will be appointed for successful applicants. During the senior year, IUG students follow the scheduling of the selected options for their B.A. or B.S. majors, with an emphasis on completing 500-level course work as appropriate. During the senior year, IUG students will start work on their thesis research to meet the M.A. thesis requirements. During the fifth year, IUG students take courses fulfilling the M.A. degree requirements and complete their M.A. thesis.

Admission Requirements

Students who wish to complete the Integrated Undergraduate and Graduate Program in Anthropology should apply for admission to both the Graduate School and the IUG Anthropology Program no later than the end of their junior year. Successful students will be admitted formally into the graduate program in Anthropology just prior to their senior year, if their progress has been satisfactory. Admission prior to the senior year is also possible in some unusual circumstances. In all cases, admission to the program will be at the discretion of the joint Anthropology-CAMS admission committee. Criteria for admission include a minimum overall GPA of 3.4 in their majors, strong recommendation letters from faculty, and an excellent proposal for a research project with a specific adviser who has agreed to guide the student through to the completion of the M.A. thesis.

Graduate Coursework

REQUIRED COURSES

ANTHROPOLOGY (ANTH)

- 493. Field Techniques (3)
- 521. Current Literature in Archaeology (2)
- 545. Seminar in Anthropology (6)
- 588. Method and Theory in Archaeology (3)
- 600. Thesis Research (6)

ADDITIONAL COURSES

Four required credits in ANTH 494(1-12) or CAMS 494(1-12)

Six required credits in CAMS 592(3), 593(3-6), or 596(1-9)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

LA

Anthropological Science

University Park, College of the Liberal Arts (ANTHS_BS)

PROFESSOR TIMOTHY RYAN, Head

The Bachelor of Science degree in Anthropological Science provides the opportunity to develop a strong foundation in anthropological theory, research methods, quantification, and laboratory science. It prepares students with the skills and competencies needed to pursue graduate study or careers in professions associated with archaeology, biological anthropology, cultural anthropology, ecological anthropology and related fields. Students contemplating futures in anthropological research, biomedical, forensic, or archaeological sciences should consider this degree.

Archaeological Science Option: The Archaeological Science option provides the opportunity to develop a strong foundation in the theory, methods and application of archaeological science. The focus is on advanced research methods, quantification, field methods, and laboratory science. It prepares students with the skills and competencies needed to pursue graduate study in archaeology as well as careers in cultural resource management. Supporting coursework in related disciplines is intended to provide depth and breadth of knowledge from the perspective of related fields.

Biological Anthropology Option: The Biological Anthropology option provides the opportunity to develop a strong foundation in the theory and methods of biological anthropology. The focus is on the theoretical underpinnings of biological anthropology together with advanced research methods, quantification, and laboratory methods current within the field. This option prepares students with the skills and competencies needed to pursue graduate study, training in the medical professions, as well as careers in professions associated with biological anthropology and related fields. Supporting coursework in related disciplines is intended to provide broader understanding of biological, ecological, and evolutionary theory.

Human Ecology Option: The Human Ecology option focuses on the theory and methods of human behavioral ecology and cultural anthropology. Students are introduced to the theories and methods current in the field of human ecology, focusing on understanding the human condition from a variety of theoretical and methodological perspectives. Students will gain competency in human cultural and behavioral variation. This option prepares students for graduate study or a diversity of careers in fields related to anthropology. Supporting coursework in related disciplines is intended to supplement and broaden perspectives on the study of the human condition.

Integrated Anthropological Science Option: The Integrated Anthropological Science option provides students with an opportunity to bridge the three main subdisciplinary areas within Anthropology. This option allows students to focus on the ways in which an integrated theoretical and methodological approach to anthropology can provide powerful insights into the human condition. Coursework cuts across all three areas and allows students to make links between the subdisciplines. This option prepares students for graduate study or careers in any field related to Anthropology.

For the B.S. in Anthropological Science, a minimum of 120 credits are required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(13 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 27 credits

REQUIREMENTS FOR THE MAJOR: 61 credits^[1]

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 28 credits

PRESCRIBED COURSES (13 credits)

ANTH 2 GS(3), ANTH 21 GN(3), ANTH 45 GS;USL;IL(3), STAT 200 GQ(4)

ADDITIONAL COURSES (15 credits)

Area/Survey courses: Select 6 credits of ANTH courses at the 200 level or below (excluding ANTH 1 GS;US;IL(3), ANTH 83S, and courses in the following ranges: 190-199, 290-299, other than 297) (Sem: 1-5)

Methods courses: Select 9 credits of Methods courses from: ANTH 321W, ANTH 380, ANTH 410, ANTH 411, ANTH 421, ANTH 425, ANTH 426W, ANTH 427W, ANTH 428, ANTH 429, ANTH 431, ANTH 432, ANTH 458, ANTH 492, ANTH 493. Students in Archaeological Science option are required to take ANTH 492/493 Field School. (Sem: 3-8)

REQUIREMENTS FOR THE OPTION: 33 credits

ARCHAEOLOGICAL SCIENCE OPTION: (33 credits)

ADDITIONAL COURSES (18 credits)

Select 12 archaeology credits from the range ANTH 420-439

Select 3 biological anthropology credits from ANTH 400-419, ANTH 460-473

Select 3 human ecology/cultural anthropology credits from ANTH 440-459, ANTH 474-479

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits of supporting courses from the list of approved courses in consultation with an adviser. See department for current list for the Archaeological Science Option.

BIOLOGICAL ANTHROPOLOGY OPTION: (33 credits)

ADDITIONAL COURSES (18 credits)

Select 12 biological anthropology credits from ANTH 400-419, ANTH 460-473

Select 3 archaeology credits from the range ANTH 420-439

Select 3 human ecology/cultural anthropology credits from ANTH 440-459, ANTH 474-479

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits of supporting courses from the list of approved courses in consultation with an adviser. See department for current list for the Biological Anthropology Option.

HUMAN ECOLOGY OPTION: (33 credits)

ADDITIONAL COURSES (18 credits)

Select 12 human ecology/cultural anthropology credits from ANTH 440-459, ANTH 474-479

Select 3 archaeology credits from the range ANTH 420-439

Select 3 biological anthropology credits from ANTH 400-419, ANTH 460-473

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits of supporting courses from the list of approved courses in consultation with an adviser. See department for current list for the Human Ecology Option.

INTEGRATED ANTHROPOLOGICAL SCIENCE OPTION (33 credits)

ADDITIONAL COURSES (18 credits)

Select 6 archaeology credits from the range ANTH 420-439

Select 6 biological anthropology credits from ANTH 400-419, ANTH 460-473

Select 6 human ecology/cultural anthropology credits from ANTH 440-459, ANTH 474-479

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits of supporting courses from the list of approved courses in consultation with an adviser. See department for current list of courses. Students in the Integrated Anthropological Science option must take at least 3 unique credits from each of the three subject area lists (Archaeological Science, Biological Anthropology, Human Ecology).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall 2017

Blue Sheet Item #: 46-03-040

Review Date: 11/14/2017

Administration of Justice

University College (AJACC): Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Schuylkill, Penn State Wilkes-Barre

The Bachelor of Arts degree in Administration of Justice provides students with a broadly based liberal education focused on the understanding and analysis of justice systems. Having grappled with the many dilemmas and controversies presented by the problems of administering justice in a complex society, graduates of this program are given the background to be educated, thoughtful, and intelligent citizens.

For the B.A. degree in Administration of Justice, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(4-7 credits of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 11-15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 43-44 credits^[1]

(This includes 4-7 credits of General Education courses; 0-3 credits of GH courses; 4 credits of GQ courses.)

PRESCRIBED COURSES (13 credits)

CRIMJ 012 GS(3), CRIMJ 100(3), CRIMJ 221(3), STAT 200 GQ(4) (Sem: 3-4)

ADDITIONAL COURSES (24-25 credits)

Select 3-4 credits in values and ethics from BA 243(4), or BA 241(2) and BA 242(2), CRIMJ 465(3), PHIL 003 GH(3), PHIL 103 GH(3), PHIL 105 GH(3), PHIL 106 GH(3), or PHIL/STS 107 GH(3), STS 100 GH(3), STS 101 GH(3) or STS/PHIL 107 GH(3) (Sem: 5-6)

Select 3 credits from CRIM J 451 US(3) or CRIM J 453 US(3) (Sem: 5-8)

Select 18 credits in CRIMJ, with at least 9 credits in the 400 level from: CRIMJ 013 GS(3), CRIMJ 083 GS(3), CRIMJ 113 US(3), CRIMJ 200(3), CRIMJ 201(3), CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3), CRIMJ 234(3), CRIMJ 241(3), CRIMJ 296(1-18), CRIMJ 297(1-9), CRIMJ 300(3), CRIMJ 301(3), CRIMJ 302(3), CRIMJ 304(3), CRIMJ 310(3), CRIMJ 311(3), CRIMJ 345(3), CRIMJ 389(3), CRIMJ 406(3), CRIMJ 407(3), CRIMJ 408(3), CRIMJ 410(3), CRIMJ 412(3), CRIMJ 413(3), CRIMJ 414(3), CRIMJ 415(3), CRIMJ 420(3), CRIMJ 421(3), CRIMJ 422(3), CRIMJ 423(3), CRIMJ 424(3), CRIMJ 425(3), CRIMJ 426(3), CRIMJ 430(3), CRIMJ 431(3), CRIMJ 432(3), CRIMJ 435(3), CRIMJ 439(3), CRIMJ 441(3), CRIMJ 450(3), CRIMJ 460(3), CRIMJ 462(3), CRIMJ 467(3), CRIMJ 469(3), CRIMJ 471(3), CRIMJ 473(3), CRIMJ 482(3), CRIMJ 489(3), CRIMJ 497(3), CRIMJ 497A(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits, in consultation with adviser, from University-wide offerings according to student's career plan (Sem: 5-8)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-04-099

Review Date: 01/10/2012

UCA Revision #2: 7/26/07

Administration of Justice

University College (AJSCC): Penn State Beaver, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre

The Bachelor of Science degree is intended to prepare students for careers in the administration of justice. Two emphases are provided: (1) for students interested in entry-level employment in justice agencies; (2) for students interested in academic or research positions and who may seek graduate education before beginning employment.

For the B.S. degree in Administration of Justice, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(4-7 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14-18 credits

REQUIREMENTS FOR THE MAJOR: 64-65 credits^[1]

(This includes 4-7 credits of General Education courses; 0-3 credits of GH courses; 4 credits of GQ courses.)

PRESCRIBED COURSES (13 credits)

CRIMJ 012 GS(3), CRIMJ 100(3), CRIMJ 221(3), STAT 200 GQ(4) (Sem: 3-4)

ADDITIONAL COURSES (39-40 credits)

(Some of the courses in this category may have prerequisites that are not included in the major.)

Select 3-4 credits in values and ethics from BA 243(4) or BA 241(2) and BA 242(2), CRIMJ 465(3), PHIL 003 GH(3), PHIL 103 GH(3), PHIL 105 GH(3), PHIL 106 GH(3), or PHIL/STS 107 GH(3), STS 100 GH(3), STS 101 GH(3) or STS/PHIL 107 GH(3) (Sem: 5-6)

Select 3 credits from CRIMJ 451 US(3) or CRIMJ 453 US(3) (Sem: 5-8)

Select 18 credits in CRIMJ, with at least 9 credits in the 400 level from: CRIMJ 013 GS(3), CRIMJ 083 GS(3), CRIMJ 113 US(3), CRIMJ 200(3), CRIMJ 201(3), CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3), CRIMJ 234(3), CRIMJ 241(3), CRIMJ 296(1-18), CRIMJ 297(1-9), CRIMJ 300(3), CRIMJ 301(3), CRIMJ 302(3), CRIMJ 304(3), CRIMJ 310(3), CRIMJ 311(3), CRIMJ 345(3), CRIMJ 389(3), CRIMJ 406(3), CRIMJ 407(3), CRIMJ 408(3), CRIMJ 410(3), CRIMJ 412(3), CRIMJ 413(3), CRIMJ 414(3), CRIMJ 415(3), CRIMJ 420(3), CRIMJ 421(3), CRIMJ 422(3), CRIMJ 423 US(3), CRIMJ 424(3), CRIMJ 425(3), CRIMJ 426(3), CRIMJ 430(3), CRIMJ 431(3), CRIMJ 432(3), CRIMJ 435(3), CRIMJ 439(3), CRIMJ 441(3), CRIMJ 450(3), CRIMJ 460(3), CRIMJ 462(3), CRIMJ 467(3), CRIMJ 469(3), CRIMJ 471(3), CRIMJ 473(3), CRIMJ 482(3), CRIMJ 489(3), CRIMJ 497(3) (Sem: 5-8)

Select 15 credits -- emphasis a or b:

a. Field Research emphasis: CRIMJ 240(4), CRIMJ 290(1-3), CRIMJ 494(5), CRIMJ 495(5) (Sem: 5-8)

b. Research and Policy Analysis emphasis: Select 15 credits, at least 6 at the 400 level from: AMST 491W(3-6), CRIMJ 424W(3), any CMPSC (3), ECON 104 GS(3), LER 100 GS(3), LST 370(3), PLSC 002(3), PLSC 419 US(3), PLSC 490(3), SOC 409 US(3), SOC 419(3), SOC 422(3), or SOC 423(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits, in consultation with adviser, from University-wide offerings according to student's career plan (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-04-100

Review Date: 01/10/2012

UCA Revision #2: 7/26/07

Applied Psychology

Berks College (APSYC)

This major is designed for students who are interested in a liberal arts degree with a concentration in applied psychology. The program features both active and collaborative classroom experiences in addition to intensive internship experiences, and is most appropriate for students who wish to develop a set of applied scientific and human relations skills that will prepare them for entry-level employment in a wide range of government and private human service organizations and agencies, and in business and industry. Because of the flexible and broad nature of the degree, students might also use this major as a preparation for graduate or professional school in business, human services, law, or the social sciences.

This program differs most notably from traditional majors in psychology in three ways: 1) it is intended for students who may not be planning to pursue a doctoral degree in psychology that would prepare them for a career as a psychologist; 2) it requires that students learn and apply skills during 12 credits of internship experiences; 3) it requires that students demonstrate skill proficiency in a comprehensive assessment in order to graduate.

For the B.A. degree in Applied Psychology, a minimum of 127 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 8-24 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 50 credits[\[1\]](#)

(This includes 0-4 credits of General Education GQ courses.)

PRESCRIBED COURSES (28 credits)

PSYCH 100 GS(3) (Sem: 1-2)
PSYCH 212 GS(3), PSYCH 296(1) (Sem: 1-4)
PSYCH 301(4) (Sem: 3-6)
PSYCH 404/EDPSY 450(3), PSYCH 495(12) (Sem: 5-8)
PSYCH 496(2) (Sem: 7-8)

ADDITIONAL COURSES (16 credits)

PSYCH 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

Select 12 credits from the following groups, including a minimum of 3 credits from each category (a total of 9 credits must be at the 400 level):

1. Abnormal, Clinical, Personality:
PSYCH 238 GS(3) (Sem: 3-6)
PSYCH 470(3), PSYCH 479 US(3), PSYCH 481(3) (Sem: 5-8)
2. Developmental, Cognitive, Learning:
EDPSY 014(3), PSYCH 256 GS(3), PSYCH 261 GS(3), PSYCH 412(3), PSYCH 415(3), PSYCH 456(3) (Sem: 3-6)
PSYCH 416/HDFS 445(3) (Sem: 5-8)
3. Industrial/Organizational, Social, Interpersonal:
PSYCH 221 GS(3), PSYCH 281 GS(3), PSYCH 420(3) (Sem: 3-8)
PSYCH 423(3), PSYCH 424(3) (Sem: 5-8)
4. Health, Wellness, Adjustment:
PSYCH 243 GS(3) (Sem: 3-6)
PSYCH 441(3), PSYCH 471(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 3 credits of 200-level psychology in consultation with an adviser (Sem: 1-2)

Select 3 credits in consultation with an adviser (Sem: 1-8)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2003

Blue Sheet Item #: 31-04-017

Review Date: 1/14/03

UCA Revision #1: 8/14/06

BK-LV

Art

University Park, College of Arts and Architecture (ARBFA)

PROFESSOR GRAEME SULLIVAN, *Director, School of Visual Arts*

The Bachelor of Fine Arts degree requires thorough preparation and is intended to develop a level of competence that will enable persons who wish to pursue professional careers in art to prepare themselves for specialized graduate studies, specialized professional training, and/or immediate participation in creative work.

Students enrolled in the School of Visual Arts may seek entrance into the B.F.A. program no earlier than the second semester and no later than the fourth semester.

There will be a continuous review of portfolio and performance of students enrolled in the B.F.A. program throughout the entire program. Students who do not meet the standards or who do not want to continue in the B.F.A. program may return to the B.A. program in art or choose another program of study.

For the B.F.A. degree in Art, a minimum of 123 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(6 of these credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 84 credits

(This includes 6 credits of General Education GA courses.)

PRESCRIBED COURSES (16 credits)[\[1\]](#)

ART 011(1), ART 110(3), ART 111 (3) (Sem: 1-2)

ART 122 US(3), ARTH 111 GA;IL(3), ARTH 112 GA;IL(3) (Sem: 1-4)

ADDITIONAL COURSES (15 credits)[\[1\]](#)

Select 15 credits at the beginning level from ART 201(3), ART 203(3), ART 211 US(3), ART 220(3), ART 223(3), ART 230(3), ART 240(3), ART 250(3), ART 280(3), ART 296(3), ART 297(3), ART 299(3), PHOTO 100 GA(3), or PHOTO 201(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (53 credits)

Select 47 credits in Art at the 300 or 400 level, 24 of which must be in an area of concentration from the following: ceramics, drawing and painting, new media, photography, printmaking, or sculpture[\[1\]](#) (Sem: 3-8)

Select 6 credits in art history (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-01-029

Review Date: 8/15/2015

AA

Architecture

University Park, College of Arts and Architecture (ARCBS and BARCH)

PROFESSOR MEHRDAD HADIGHI, *Head, Department of Architecture*

The Department of Architecture is a member of the Association of Collegiate Schools of Architecture and the Bachelor of Architecture degree is accredited by the National Architectural Accrediting Board. The major provides for the education of architects at the professional and pre-professional levels.

"In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a 6-year, 3-year, or 2-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree."

The Pennsylvania State University, Department of Architecture offers the following NAAB-accredited degree program:

B.Arch. (162 undergraduate credits)

Next accreditation visit for the B.Arch. accredited degree program: 2022 (anticipated)
(Excerpt from NAAB Conditions for Accreditation, 2009 Edition)

Bachelor of Architecture

The professional program (BARCH) is a five-year curriculum leading to the Bachelor of Architecture degree requiring 162 credits. It prepares those who seek careers as practicing architects. It also provides professional preparation for those who wish to enter related design fields. Graduates of the Bachelor of Architecture program are eligible, after appropriate internship experience, to sit for the Architect Registration Examination. Successful completion of all parts of the Architect Registration Examination is required for registration as an architect. The Bachelor of Architecture curriculum includes coursework in architectural design, history, theory, structural systems, building materials, environmental control systems, visual communications, professional practice, and systems integration. Supporting courses provide students with the flexibility to explore a range of interests, develop concentrations, or pursue minors. A required semester abroad in Rome, Italy, is also a component of this program. All students admitted to the University in the Department of Architecture are enrolled in the five-year professional program leading to the Bachelor of Architecture degree.

Students may elect to leave Penn State after completing the requirements of the four-year (ARCBS) program and receive the Bachelor of Science degree.

Bachelor of Science

The pre-professional Bachelor of Science degree program in Architecture (ARCBS) is a four-year curriculum which requires a minimum of 135 credits. The curriculum mirrors the first four years of the professional (BARCH) program. The ARCBS program prepares graduates to pursue careers in fields such as construction, real estate development, public administration, or historic preservation. Students may also continue their education at the graduate level in fields such as architecture, urban planning, or law. Enrollment in the pre-professional (ARCBS) program is limited to those students who transfer from the professional (BARCH) program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

Bachelor of Architecture

GENERAL EDUCATION: 45 credits
(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 123 credits^[1]
(This includes 6 credits of General Education GA courses.)

PRESCRIBED COURSES (99 credits)
AE 210(3), ARCH 121(2), ARCH 122(2), ARCH 131(4), ARCH 132(4), ARTH 201 GA;IL(3), ARTH 202 GA;US;IL(3) (Sem: 1-2)
AE 421(3), AE 422(3), ARCH 203(3), ARCH 204(3), ARCH 210(3), ARCH 231(6), ARCH 232(6) (Sem: 3-4)
AE 211(3), AE 424(3), ARCH 311(3), ARCH 331(6), ARCH 332(6) (Sem: 5-6)
ARCH 431(6), ARCH 480(3), ARCH 499A(6), ARCH 499B IL(3), ARCH 499C IL(3) (Sem: 7-8)
ARCH 451(3), ARCH 491(6 per semester, maximum of 12) (Sem: 9-10)

ADDITIONAL COURSES (6 credits)
Select 6 credits from: ARCH 491(6, maximum 12), ARCH 492H(6), or ARCH 499F(6) (Sem: 9-10)

SUPPORTING COURSES AND RELATED AREAS (18 credits)
Select 3 credits in non-Western traditions in architecture from approved department list (Sem: 1-8)
Select 15 credits in consultation with an academic adviser. This category of course work gives students the freedom to explore a range of academic interests, develop concentrations, or pursue minors (Sem: 3-10)

Bachelor of Science

GENERAL EDUCATION: 45 credits
(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 96 credits^[1]
(This includes 6 credits of General Education GA courses.)

PRESCRIBED COURSES (87 credits)
AE 210(3), ARCH 121(2), ARCH 122(2), ARCH 131(4), ARCH 132(4), ARTH 201 GA;IL(3), ARTH 202 GA;US;IL(3) (Sem: 1-2)
AE 421(3), AE 422(3), ARCH 203(3), ARCH 204(3), ARCH 210(3), ARCH 231(6), ARCH 232(6) (Sem: 3-4)

AE 211(3), AE 424(3), ARCH 311(3), ARCH 331(6), ARCH 332(6) (Sem: 5-6)
ARCH 431(6), ARCH 499A(6), ARCH 499B IL(3), ARCH 499C IL(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits in non-Western traditions in architecture from approved department list (Sem: 1-8)

Select 6 credits in consultation with an academic adviser (Sem: 3-8)

Integrated B.ARCH./M.S. in Architecture Program

The Department of Architecture offers a limited number of academically superior students enrolled in the fourth year of the Bachelor of Architecture degree program the opportunity to enroll in an integrated program leading to both the B.Arch. and the M.S. in Architecture degrees. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to achieve greater depth and comprehensiveness than if the degrees are pursued sequentially, and to earn the two degrees in a shorter period of time. In particular, the program encourages the student to integrate the undergraduate thesis design project with the master's thesis, thereby achieving a greater depth of inquiry. The number of openings to this special program is limited; admission is by invitation of the faculty and is extremely selective.

Admission Requirements

Applicants to the integrated program must be enrolled in the fourth year of a B.Arch. program or otherwise qualified to apply for admission to the fifth year of the B.Arch. program at Penn State. To be admitted, applicants must have a minimum 3.20 junior/senior overall grade-point average (on a 4.0 scale) as well as: (1) a minimum 3.20 GPA in architectural design courses (studio), and (2) a minimum 3.20 GPA in all course work except architectural design courses (studio).

All applicants for admission to the Integrated B.Arch./M.S. in Architecture degree program must submit the following:

- a completed Graduate School application, found online at <http://www.gradsch.psu.edu/portal/>, and payment of the application fee.
- names of three faculty members or professionals acquainted with the applicant's academic history who can be contacted and invited to provide reference letters.
- a statement of intent/plan of study, which should be primarily a description of the applicant's professional goals. The statement/plan shall clearly describe the student's proposed general thesis topic and a strategy for pursuing it, including a list of proposed courses and a list of faculty whom the student foresees as contributing to the course of study.
- a portfolio of creative and design work executed at the undergraduate level, under professional guidance or independently, provided that such work can be evidenced as executed by the applicant. A minimum portfolio representation of one project for each year of academic undergraduate study, or its equivalent, is required.

The best-qualified students will be accepted up to the number of spaces available for new students. Acceptance to the program prior to the completion of all required course work is provisional, contingent upon meeting the previous requirements.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lastest Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-011

Review Date: 04/08/2014

AA

Army (ARMY)

The Army Reserve Officers' Training Corps (Army ROTC) is an elective program of instruction and training that offers qualified students the opportunity to earn a commission as an officer (Second Lieutenant) and to serve in the United States Army, Army National Guard, or United States Army Reserve while working toward a baccalaureate degree as a full-time student. The program emphasizes student learning and participation in applied leadership, leadership theory, decision making, management skills, time management, and military knowledge and skills. The four-year program is conducted in two successive phases--the Basic Course and Advanced Course (20 total credits). At least 6 Army ROTC credits may be applied toward baccalaureate degree requirements in all majors, usually as elective credits. Course subjects and credits appear under ROTC course descriptions in this bulletin.

The Basic Course is a four-course series, usually taken in the freshman and sophomore years. Freshman and sophomore courses are 2 credits each. The Basic Course trains the student in a variety of topics, including the national defense structure, leadership theory and principles, land navigation, small-unit operations and tactics, military history, and basic military skills and knowledge. The student incurs no military service obligation while enrolled in the Basic Course, and may dis-enroll at any time (except for sophomores on Army ROTC scholarships). Enrollment in the Basic Course is open to all Penn State full-time students. Also, uniforms, textbooks, and most equipment are furnished at no charge by the government to all enrolled students.

The Army ROTC program is much more than just taking classes. Each semester, the Army ROTC program consists of five activity segments: classroom lectures (one or two fifty-minute classes per week), a 100-minute Leadership Laboratory, Physical Training sessions, day trips and field training exercises, and extracurricular activities that include numerous clubs and social events. While the latter three activities are generally optional for enrolled Basic Course students, most students become progressively involved to enhance their training, develop esprit de corps, and take part for the social and fun aspects of the program.

The Advanced Course consists of a series of four courses, each for 3 credits. The Advanced Course instructs and evaluates in such areas as leadership and management, tactical operations, strategy, personnel administration, logistics, military justice, and ethics. Advanced Course students incur a service obligation when contracted, after which they receive a cash stipend of up to \$400 per month (tax free) up to \$4,000 per academic year. Normally, in the summer between the junior and senior years, students attend a five- to six-week National Advanced Leader's Course, for which salary and travel expenses are paid for the student. National Advanced Leader's Course is a critical hurdle that students must pass to receive a commission. In addition, students must complete at least one University course in each of five areas prior to commissioning: written communications, human behavior, computer literacy, mathematical reasoning, and American military history. These courses may also fulfill the student's General Education or academic major curriculum requirements.

Students may enter Army ROTC during their baccalaureate studies up until the start of their junior year via several lateral entry methods. These methods include compressing the Basic Course into one year (for sophomores), attending a four-week summer training program called Army ROTC Leader's Training Course, or by receiving constructive credit for prior military service. Entry after this time is possible only when an enrolling student will be continuing his/her education after baccalaureate graduation. Contracted students who wish to continue their education at a graduate level may request an education delay before starting their service obligation.

Three-year Army ROTC scholarships are available to students on a competitive basis. These merit scholarships pay full tuition, a book allowance (\$600 per year), and a tax-free subsistence stipend of up to \$400 per month up to \$4,000 per academic year. Four-year scholarships are available only through competition in the high school senior year. Army ROTC scholarships are awarded in five major categories: engineering, analytic/physical sciences, nursing, technical/management, and generalists (all other majors except theology). In particular, Army ROTC has a strong program for Nursing majors with numerous scholarship and enrollment options.

Penn State Army ROTC is one of the largest and most successful ROTC programs in the United States. Army ROTC is offered at the following campuses: Abington, Altoona, Hazleton, and University Park. However, only the University Park campus offers the complete four-year program within the Penn State Army ROTC system. Army ROTC is also available at most other campuses through cross-enrollment agreements with other colleges and universities. For additional information on Army ROTC, see the enrollment officer at 212 Wagner Building on the University Park campus or call 814-863-0368 (toll free: 1-866-558-3513) or visit us at www.psu.edu/dept/armyrotc on the Web.

Effective Date: Current

Review Date: 4/19/04

Archaeological Science

University Park, College of the Liberal Arts (ARSCI)

PROFESSOR DOUGLAS J. KENNETT, *Head, Department of Anthropology*

(The Bachelor of Science degree in Archaeological Science is offered by the Archaeology Program in the Department of Anthropology.)

This degree provides the opportunity to develop a strong foundation in research methods, quantification, field methods, and laboratory science. It prepares students with the skills and competencies needed to pursue careers in cultural resource management. Students contemplating futures in nonacademic archaeology should consider this degree or some of its recommended courses.

For the B.S. degree in Archaeological Science, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

GENERAL EDUCATION: 45 credits

(10 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 5 credits

REQUIREMENTS FOR THE MAJOR: 70 credits^[1]

(This includes 10 credits of General Education courses; 4 credits of GQ courses; 6 credits of GN courses.)

PRESCRIBED COURSES (40 credits)

ANTH 002 GS(3), ANTH 011 GS;IL(3), ANTH 021 GN(3), ANTH 045 GS;US;IL(3), ANTH 421(3), ANTH 423(3), ANTH 428(3), ANTH 433(3), 3 credits from ANTH 492(3-6), 3 credits from ANTH 493(3-6), GEOSC 001(3), SOILS 101 GN(3), STAT 200 GQ(4) (Sem: 1-6)

ADDITIONAL COURSES (30 credits)

Select 9 additional Archaeology credits from the following ranges: ANTH 320-339 or ANTH 420-439 (Sem: 3-8)

Select an additional 18 credits in ANTH electives (other than ANTH 001, no more than 9 credits from 190-199, 290-299, 390-399, 490-499, other than 297 and 497) (Sem: 3-8)

Select 3 credits from GEOSC 320(3), or SOILS 416(4) (Sem: 6-8)

Integrated B.S. in Archaeological Science and B.A. in Classics and Ancient Mediterranean Studies/M.A. in Anthropology Degree Requirements

The Department of Anthropology offers an integrated B.A./B.S./M.A. (IUG) program designed to allow academically superior students to obtain a B.A. or B.S. degree in Anthropology, a B.A. degree in Classics and Ancient Mediterranean Studies (CAMS), a B.S. degree in Archaeological Science and a M.A. degree in Anthropology in five years of study. To complete the program in five years, students interested in the Integrated Undergraduate and Graduate degree in Anthropology must apply for admission to the Graduate School and the Integrated B.S./M.S. Program by the end of their junior year.

During the first three years, the student will follow course scheduling for the B.A. degree in CAMS and either the B.A. degree in Anthropology or the B.S. degree in Archaeological Science (see the Undergraduate *Bulletin*). Students who intend to enter the IUG program are encouraged to take upper level classes during their first three years whenever appropriate. By the end of the junior year, students normally apply for admission to both the IUG program and to the Graduate School. Acceptance decisions will be made prior to the beginning of the senior year and M.A. advisors will be appointed for successful applicants. During the senior year, IUG students follow the scheduling of the selected options for their B.A. or B.S. majors, with an emphasis on completing 500-level course work as appropriate. During the senior year, IUG students will start work on their thesis research to meet the M.A. thesis requirements. During the fifth year, IUG students take courses fulfilling the M.A. degree requirements and complete their M.A. thesis.

Admission Requirements

Students who wish to complete the Integrated Undergraduate and Graduate Program in Anthropology should apply for admission to both the Graduate School and the IUG Anthropology Program no later than the end of their junior year. Successful students will be admitted formally into the graduate program in Anthropology just prior to their senior year, if their progress has been satisfactory. Admission prior to the senior year is also possible in some unusual circumstances. In all cases, admission to the program will be at the discretion of the joint Anthropology-CAMS admission committee. Criteria for admission include a minimum overall GPA of 3.4 in their majors, strong recommendation letters from faculty, and an excellent proposal for a research project with a specific adviser who has agreed to guide the student through to the completion of the M.A. thesis.

Graduate Coursework

REQUIRED COURSES

ANTHROPOLOGY (ANTH)

493. Field Techniques (3)
521. Current Literature in Archaeology (2)
545. Seminar in Anthropology (6)
588. Method and Theory in Archaeology (3)
600. Thesis Research (6)

ADDITIONAL COURSES

Four required credits in ANTH 494(1-12) or CAMS 494(1-12)

Six required credits in CAMS 592(3), 593(3-6), or 596(1-9)

NOTE: Internships will be counted as elective credits.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

UCA Revision #1: 8/2/06

LA

Art History

University Park, College of Arts and Architecture (ART H)

PROFESSOR ANDREW SCHULZ, *Interim Head, Department of Art History*

The art history major is designed to provide students with a solid background in the history of art. The histories of painting, sculpture, architecture, design, and the graphic arts are examined in relation to such contextual issues as religion, politics, society, gender, economics, philosophy, and culture. Students who pursue the Bachelor of Arts in art history will acquire a thorough humanistic education that involves writing, speaking, and participating in group discussions, as well as developing a facility in at least one foreign language. Majors are also encouraged to pursue a study abroad experience.

The major provides students with a solid liberal arts background and is an excellent preparation for the further study of art history or other related fields in graduate school. With a B.A. in art history, graduates have found employment in museums, galleries, publishing, arts agencies, visual resources, archives/libraries, archaeology, historic preservation, and historic sites. The two most common careers for art historians are teaching at the college level or working in a museum (as a curator, registrar, director, etc.). These careers typically require graduate degrees.

For the B.A. degree in Art History, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 19 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits [\[1\]](#)

PRESCRIBED COURSES (9 credits)
ARTH 111 GA;IL(3), ARTH 112 GA;IL(3) (Sem: 1-4)
ARTH 350(3) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)
(At least 12 credits must be taken at the 400 level, ARTH 297, ARTH 397, and ARTH 497 also may be used to fulfill the additional course requirements when the subject matter is appropriate. Any one course may not be double counted for more than one category.)
Select 3 credits (Non-Western Intro) from ARTH 120 GA;IL(3), ARTH 130 GA;US;IL(3), ARTH 140 GA;IL(3) (Sem: 1-4)
Select 3 credits (Architectural History Intro) from ARTH 201 GA;IL(3), ARTH 202 GA;US;IL(3), or ARTH 330 GA;IL(3) (Sem: 1-4)
Select 3 credits (Africa/Asia/Oceania/Pre-Columbian Americas) from ARTH 120 GA;IL(3), ARTH 130 GA;US;IL(3), ARTH 140 GA;IL(3), ARTH 315 GA;IL(3), ARTH 320 GA;IL(3), ARTH 330 GA;IL(3), ARTH 335 GA;IL(3), ARTH 440 IL(3-9), ARTH 445 IL(3), ARTH 446 IL(3), ARTH 447 IL(3) or ARTH 460 IL(3) (Sem: 3-8)
Select 3 credits (Ancient/Byzantine/Medieval) from ARTH 301 GA;IL(3), ARTH 302 GA;IL(3), ARTH 311 GA;IL(3), ARTH 312 GA;IL(3), ARTH 401 IL(3-9), ARTH 402 IL(3), ARTH 411 IL(3), ARTH 412 IL(3), ARTH 420 IL(3), ARTH 422 IL(3), ARTH 426 US;IL(3), ARTH 442 IL(3), or ARTH 452 IL(3) (Sem: 3-8)
Select 3 credits (Renaissance/Baroque/Modern/Contemporary) from ARTH 225 GA;GH(3), ARTH 250(3), ARTH 303 GA;IL(3), ARTH 304 GA;IL(3), ARTH 305 GA;IL(3), ARTH 307 GA;US(3), ARTH 313 GA;IL(3), ARTH 314 GA;IL(3-6), ARTH 325 GA;IL(3), ARTH 326 GA;IL(3), ARTH 405 US;IL(3-6), ARTH 410(3), ARTH 415 US(3), ARTH 416 US(3), ARTH 420 IL(3), ARTH 423 IL(3-9), ARTH 424 IL(3), ARTH 426 US;IL(3), ARTH 429 IL(3), ARTH 435 IL(3-6), ARTH 450 US;IL(3), ARTH 456 IL(3), ARTH 458 IL(3), ARTH 462 IL(3), ARTH 464 IL(3), ARTH 470 US;IL(3), ARTH 475 US(3) or ARTH 476(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 12 credits of art history (excluding ARTH 100 GA;IL) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-06-013

Review Date: 04/10/2012

AA

Art

Abington College (ARTAB)
University Park, College of Arts and Architecture (ARTBA)

PROFESSOR GRAEME SULLIVAN, *Director, School of Visual Arts*

The B.A. degree in art provides a comprehensive liberal education coupled with professional resident instruction in art. Depending on each student's objectives and course choices, this degree provides preparation for a professional career, a foundation for graduate studies, or a liberal arts education in art. Each student must elect an area of concentration from one of the following: ceramics, drawing and painting, new media, photography, printmaking, or sculpture.

For a B.A. degree in Art, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR. See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 5 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 52 credits

(This includes 6 credits of General Education GA courses.)

PRESCRIBED COURSES (16 credits)[\[1\]](#)

ART 011(1), ART 110(3), ART 111(3) (Sem: 1-2)

ART 122 US(3) (Sem: 1-4)

ARTH 111 GA;IL(3), ARTH 112 GA;IL(3) (these credits may also be counted toward the General Education Arts requirement) (Sem: 1-4)

ADDITIONAL COURSES (15 credits)[\[1\]](#)

Select 15 credits from ART 201(3), ART 203(3), ART 211 US(3), ART 220(3), ART 223(3), ART 230(3), ART 240(3), ART 250(3), ART 260(3), ART 280(3), ART 296(3), ART 297(3), ART 299 IL(3), PHOTO 100 GA(3), or PHOTO 201(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

(Include at least 15 credits at the 300 or 400 level.)

Select 15 credits from one of the following areas of concentration: ceramics, drawing and painting, new media, photography, printmaking, and sculpture[\[1\]](#)

(Sem: 3-8)

Select 6 credits in art history (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-01-028

Review Date: 09/15/2015

AA

Arts Administration

*Penn State Erie, The Behrend College (ARTSA)
Penn State Lehigh Valley (ARACC)*

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

The Penn State Erie Arts Administration program is intended for students with an interest in the arts and a desire to pursue careers in the administration or management of arts organizations such as museums, theatre companies, orchestras and choruses. The program combines a broad exposure to the arts with intensive training in management, marketing, writing, and development.

The interdisciplinary Arts Administration program answers the growing need for leaders and administrators of arts organizations that must compete, survive, and thrive in a corporate world. Recognizing that these organizations have missions that are different from business corporations, the Arts Administration program aims to produce capable arts administrators, managers, and entrepreneurs with both aesthetic sensibilities and business acumen. Successful arts administration is crucial to the continued vitality of modern cultural institutions, creative enterprises, and arts organizations. If the public is to benefit, skilled arts administrators must facilitate the work of artists to realize their artistic vision and share it with the public, by executing the necessary financial, legal, and organizational decisions. In short, talented arts administrators are partners in a collaborative artistic process. The major includes the following options:

Digital Media Option - emphasizes design and social media engagement, so that student may create and manage online content for cultural organizations. Students develop proficiency in web writing, image editing, layout, and advertising.

Marketing Option - provides a business core for careers that emphasize marketing with arts organizations. The coursework includes statistics, marketing research, and other marketing courses relevant to arts and cultural organizations.

For the B.A. degree in Arts Administration, a minimum of 121 credits is required. Students must earn C or better in ARTH 111 GA;IL(3) or ARTH 112 GA;IL(3), MUSIC 005 GA(3), THEA 105 GA(3) to be eligible for entrance to the major. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(15-18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of Bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.) (See description of Bachelor of Arts Degree Requirements in this bulletin.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): (72-73 credits)
(This includes 15-18 credits of General Education courses: 6 credits of GA courses; 3-6 credits of GQ courses; 3 credits of GS courses, 3 credits of GWS courses.)

PRESCRIBED COURSES: (39 credits)
MUSIC 5 GA(3)[\[1\]](#), THEA 105 GA(3)[\[1\]](#) (Sem: 1-2)
MIS 204(3), MKTG 301(3)[\[1\]](#) (Sem: 3-4)
ECON 102 GS(3), ENGL 202D GWS(3) (Sem: 4)
ACCTG 211(4), ARTSA 301(3)[\[1\]](#), ARTSA 402(3)[\[1\]](#), ARTSA 403(3)[\[1\]](#), ARTSA 404(3)[\[1\]](#), BA 241(2), COMM 370(3)[\[1\]](#)[\[18\]](#) (Sem: 5-6)

ADDITIONAL COURSES (12 credits)
Select 3 credits from: ARTH 111 GA;IL(3)[\[1\]](#)[\[18\]](#) or ARTH 112 GA;IL(3)[\[1\]](#)[\[18\]](#)
Select 3 credits from: MATH 21 GQ(3) or higher (Sem: 1-2)
Select 3 credits from: ARTSA 401(3)[\[1\]](#) or COMM 472(3)[\[1\]](#)
Select 3 credits from ARTSA 495A (3)[\[1\]](#)
Students desiring to take an internship for ARTSA credit must have a GPA of 3.00. Students with lower than a 3.00 GPA can request an exemption by providing letters of recommendation for the internship form 2 members of the ARTSA faculty
OR
Students may enroll in an additional COMM or MKTG course at the 400 level to develop option-specific competencies instead of taking ARTSA 495A.

REQUIREMENTS FOR THE OPTION (21-22 credits)

DIGITAL MEDIA OPTION (21 credits)

PRESCRIBED COURSES (9 credits)
COMM 320(3)[\[1\]](#), COMM 441(3)[\[1\]](#), ENGL 420(3)[\[1\]](#)

ADDITIONAL COURSES (6 credits)
Select 3 credits from: ARTH 111 GA;IL(3)[\[1\]](#) or ARTH 112 GA;IL(3)[\[18\]](#) or MUSIC 8 GA(3)[\[18\]](#) or THEA 102 GA(3)[\[18\]](#)
Select 3 credits from COMM 270(3)[\[1\]](#)[\[18\]](#) or GD 100 GA(3)[\[18\]](#)

SUPPORTING COURSES AND RELATED AREAS (6 credits)
Select 6 credits from program approved list in Music, Theatre or Visual Arts in consultation with adviser and according to student interest (Sem: 4-7)

MARKETING OPTION (22 credits)

PRESCRIBED COURSES (3 credits)
MKTG 342(3)[\[1\]](#)

ADDITIONAL COURSES (10 credits)
Select 3 credits from ARTH 111 GA;IL(3)[\[18\]](#) or ARTH 112 GA;IL(3)[\[18\]](#) or MUSIC 8 GA(3)[\[18\]](#) or THEA 102 GA(3)[\[18\]](#) (Sem: 1-4)
Select 3 credits from MKTG 344(3)[\[1\]](#) or MKTG 330(3)[\[1\]](#)
Select 4 credits from SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 6 credits from program approved list in Music, Theatre or Visual Arts in consultation with adviser and according to student interest. In addition, students will select 3 credits from a program-approved list of 400 level courses in Marketing. (Sem: 4-7)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[18] A grade of C or better per course is required for teacher certification.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-134

Review Date: 8/22/2017

Astronomy and Astrophysics

University Park, Eberly College of Science (ASTRO)

PROFESSOR DONALD P. SCHNEIDER, *Head*

Astronomy involves the study of the properties, physical nature and origins of the planets, stars, galaxies and universe as a whole. It involves development of instrumentation, observations of celestial objects with ground- and space-based telescopes, and interpretation of findings using the mathematical laws of physics such as gravity, electromagnetism and quantum mechanics. The undergraduate major provides a strong and broad foundation in mathematics, physical science and computation as well as a detailed understanding of modern astronomy. Many research opportunities are available to complement the formal classwork. Graduates proceed to advanced degrees in astronomy and other sciences, and into a wide variety of technical professions.

In order to be eligible for entrance to the Astronomy and Astrophysics major, a student must have: 1) Attained at least a 2.00 cumulative grade-point average. 2) Completed ASTRO 291 GN(3), CHEM 110 GN(3), MATH 140 GQ(4), MATH 141 GQ(4), PHYS 211 GN(4), and PHYS 212 GN(4); and earned a grade of C or better in each of these courses.

For the B.S. degree in Astronomy and Astrophysics, a minimum of 125 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 98 credits

(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 65 credits

PRESCRIBED COURSES (50 credits)

ASTRO 291 GN(3) [\[1\]](#), ASTRO 292 GN(3) [\[1\]](#), ASTRO 320 GN(3), ENGL 202C GWS(3), MATH 230(4), MATH 251(4), PHYS 237(3) (Sem: 3-4)
CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), CHEM 112 GN(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#), PHYS 213 GN(2) [\[1\]](#), PHYS 214 GN(2) [\[1\]](#) (Sem: 1-4)

ADDITIONAL COURSES (3 credits)

CMPSC 121 GQ(3), CMPSC 201 GQ(3), or CMPSC 202 GQ(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits [\[1\]](#) from 400-level ASTRO courses except ASTRO 401, ASTRO 402, ASTRO 494 and ASTRO 496 (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 33 credits

GRADUATE STUDY OPTION: (33 credits)

PRESCRIBED COURSES (10 credits)

PHYS 400(3), PHYS 410(3-4), PHYS 419(3) (Sem: 5-8)

ADDITIONAL COURSES (9-10 credits)

Select 3 credits from MATH 405(3), MATH 411(3), or MATH 417(3) (Sem: 3-4)
Select 6-7 credits from PHYS 402(4), PHYS 406(3), PHYS 411(3), PHYS 420(3), PHYS 457(1-3), PHYS 457W(3), PHYS 458(4); PHYS 461(3); PHYS 479(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (13-14 credits)

Select 3 additional credits from advanced courses in computer science and engineering, mathematics, or statistics (Sem: 5-6)

Select 10-11 credits in consultation with adviser from department list (Sem: 3-8)

COMPUTER SCIENCE OPTION: (33 credits)

PRESCRIBED COURSES (9 credits)

CMPSC 122(3), CMPSC 221(3) (Sem: 5-6)

CMPSC 451(3) (Sem: 6-8)

ADDITIONAL COURSES (9 credits)

Select 3 credits from STAT 318(3), STAT 319(3), STAT 401(3), or STAT 414(3) (Sem: 5-6)

Select 6 credits from CMPEN 271(3), CMPEN 331(3), CMPSC 360(3), or CMPSC 465(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 3 additional credits from advanced courses in computer science and engineering, mathematics, or statistics (Sem: 5-8)

Select 12 credits in consultation with adviser from department list (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-03-057

Review Date: 11/15/2016

UCA Revision #1: 8/14/06

UCA Revision #2: 7/26/07

[Comments](#)

SC

Dept head updated by Publications: 8/2/11

Athletic Training

University Park, College of Health and Human Development (ATHTR)

Not all majors are available at every campus. The Athletic Training major will only be offered at University Park campus.

PROFESSOR NANCY I. WILLIAMS, *Head, Department of Kinesiology*

The Athletic Training major provides a concentrated program of courses designed to prepare students for a career in the profession of athletic training. This major has been designed to meet the standards for national certification by the Board of Certification (BOC) and legal certification by the Commonwealth of Pennsylvania.

Students are admitted into the program on a competitive basis following completion of prerequisite courses (see requirements for admission). Students must also meet the "Technical Standards for the Undergraduate Athletic Training Program at Penn State University" related to the physical and psycho-emotional demands placed upon students in the major. Upon admission, students complete a 5-semester sequence of coursework and supervised clinical rotations. Students typically commit 200 to 300 hours to clinical practical experiences in each of the last 4 semesters of the program. The Technical Standards course sequencing and prerequisite courses can be found at http://www.hhdev.psu.edu/kines/undergrad/docs/Athletic_Training_Technical_Standards.pdf or obtained through the Department of Kinesiology. Full course descriptions are found in the University *Bulletin*.

Students seeking to transfer from other colleges or universities will have their transcripts evaluated after acceptance to Penn State to identify those courses and credits that will be applied to completion of degree requirements. Coursework specific to athletic training will not be considered for transfer unless completed in a Commission on Accreditation of Athletic Training Education (CAATE) accredited athletic training education program.

The Athletic Training major requires a minimum of 120 credits for graduation. Upon graduation and successful completion of the national BOC examination, students may seek employment in various professional settings including: professional sports, colleges and universities, secondary schools, hospitals, sports medicine clinics, industrial settings plus many more.

Minimum Requirements for Admission to the Athletic Training major (admission is competitive--meeting minimum requirements does not assure admission into the major):

1. Submission of printable online Athletic Training (AT) Program Application
2. Cumulative grade-point average of 2.5.
3. 3.0 grade-point average in KINES 135(3), KINES 202(4), KINES 231(3), KINES 233(3).
4. Completion of entrance interview with Athletic Training Program Director or designee.
5. Evidence of ability to meet the physical and psycho-emotional standards as outlined in the "Technical Standards for the Undergraduate Athletic Training Program at Penn State."

Additional information about the major, including Technical Standards, the Athletic Training (AT) Program Application, course sequencing, and prerequisites can be found at: <http://www.hhdev.psu.edu/kines/undergraduate/athletic-training> or obtained through the Department of Kinesiology. Full course descriptions are found in the University *Bulletin*.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. BB H requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 96-100 credits

(This includes 21 credits of General Education courses: 6 credits of GQ courses; 9 credits of GN courses; 3 credits of GS courses; 3 credits of GHA courses).

ELECTIVES: 0-1 credits

PRESCRIBED COURSES (81 credits) [1]

MATH 022 GQ(3), CHEM 111 GN(1), KINES 135(3), PSYCH 100 GS(3) (Sem: 1-2)
BIOL 141 GN(3), KINES 231(3), KINES 233(3) (Sem: 3)
KINES 202(4), NUTR 251 GHA(3), KINES 321(3), KINES 341 IL(3), KINES 345(3), KINES 350(3), KINES 360(3), KINES 384(3)(Sem: 3-6)
KINES 232(3), KINES 334(3) (Sem: 4)
KINES 335(3), KINES 395F(3), KINES 434(3) (Sem: 5)
KINES 336(3), KINES 395G(3), KINES 435(3), KINES 436(4) (Sem: 6)
KINES 395I(3), KINES 438(3) (Sem: 7)
KINES 495F(3) (Sem: 8)

ADDITIONAL COURSES (15-19 credits) [1]

Select 3-5 credits: CHEM 106 GN(5); CHEM 110 GN(3) (Sem: 1-2)
Select 3 credits: KINES 100(3); KINES 141 US;IL(3) (Sem: 1-4)
Select 3 credits: KINES 101(3); KINES 180(3) (Sem: 1-4)
Select 3-4 credits: PHYS 150 GN(3); PHYS 250 GN(4) (Sem: 3-4)
Select 3-4 credits: STAT 200 GQ(4); STAT 250 GQ(3); SCM 200 GQ(4); (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-03-042

Review Date: 11/17/2015

Biological Engineering

University Park, College of Agricultural Sciences
University Park, College of Engineering (B E)

PROFESSOR PAUL H. HEINEMANN, *Head of the Department of Agricultural and Biological Engineering*

This major helps prepare students for careers involving the application of engineering principles to agricultural and biological production systems, processing systems, and conservation of land and water resources. Education in mathematics, physics, and engineering sciences common to all engineering disciplines is provided along with specialized training in biological and agricultural sciences. The curriculum covers all areas of biological engineering, including development of machines for biological processing and agriculture, postharvest handling and processing, natural resource management and utilization, biological processes, food engineering, and structures and their environmental modifications. A student must select the Agricultural Engineering option, Food and Biological Processing Engineering option or the Natural Resources Engineering option.

Program Educational Objectives:

Early career Biological Engineering graduates will be expected to:

1. Demonstrate proficiency in basic and engineering sciences related to biological processing, natural resource, and agricultural engineering fields;
2. Effectively identify, analyze and design sustainable solutions to address issues and opportunities throughout the world;
3. Work in teams and effectively communicate within and outside the profession;
4. Demonstrate strong leadership skills, ethical integrity, and professional engagement

Program Outcomes (Student Outcomes):

Upon graduation Biological Engineering students will have:

- a. an ability to apply knowledge of mathematics, science, and engineering
- b. an ability to design and conduct experiments, as well as to analyze and interpret data
- c. an ability to design a system, component, or process to meet desired needs
- d. an ability to function on multi-disciplinary teams
- e. an ability to identify, formulate, and solve engineering problems
- f. an understanding of professional and ethical responsibility
- g. an ability to communicate effectively
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context
- i. a recognition of the need for an ability to engage in life-long learning
- j. a knowledge of contemporary issues
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Principles of engineering design experiences are integrated throughout the junior-year curriculum by having students solve problems typical of those encountered in the agricultural and biological engineering profession. A year-long major design experience in the senior year emphasizes that biological engineers must learn not only how to develop engineering solutions to unique, practical problems using the newest technology, but also to assess and integrate the social and ethical implications of their solutions.

Careers for graduates include design, development, and research engineering positions involving biological processes, machinery development, natural resources management, materials handling, biological product development, and structural systems for animals, plants, and crop storage. Biological engineers are employed in industry, consulting firms, and governmental agencies in the United States and abroad. Graduates deal with the various engineering aspects associated with production and processing of food, fiber, and other biological materials, within the constraints of environmental protection and natural resource conservation.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Biological Engineering, a minimum of 129 credits is required. The baccalaureate program in Biological Engineering at University Park is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(27-28.5 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 111-112.5 credits
(This includes 27-28.5 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses; and 1.5 credits of GHA courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 75 credits

PRESCRIBED COURSES (68 credits)
CHEM 110 GN(3) [\[11\]](#), CHEM 111 GN(1), EMCH 211(3) [\[11\]](#), EDSGN 100(3), ENGL 015 GWS(3), MATH 140 GQ(4) [\[11\]](#), MATH 141 GQ(4) [\[11\]](#), PHYS 211 GN(4) [\[11\]](#) (Sem: 1-2)
EMCH 212(3) [\[11\]](#), EMCH 213(3) [\[11\]](#), ME 300(3) [\[11\]](#), MATH 231(2), MATH 251(4) [\[11\]](#), PHYS 212 GN(4) [\[11\]](#) (Sem: 3-4)
BE 301(3) [\[11\]](#), BE 302(4) [\[11\]](#), BE 304(3) [\[11\]](#), BE 305(3) [\[11\]](#), BE 308(3) [\[11\]](#), BE 391 GWS(2) (Sem: 5-6)
BE 392 GWS(2), BE 460(1), BE 466(3) (Sem: 7-8)

ADDITIONAL COURSES (7 credits)
CAS 100A GWS(3) or CAS 100B GWS(3)
Select 1 credit of First-Year Seminar (Sem: 1-2)
AGBM 101 GS(3) or ECON 102 GS(3), or ECON 104 GS(3) (Sem: 3-4)

REQUIREMENTS FOR THE OPTIONS: 36-37.5 credits

AGRICULTURAL ENGINEERING OPTION: (36 credits)

ADDITIONAL COURSES (6 credits)
CE 360(3) [\[11\]](#) or ME 320(3) [\[11\]](#) (Sem: 5-6)
IE 424(3) or STAT 401(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (30 credits)Select 3 credits in math/basic science [\[26\]](#) (Sem: 3-6)Select 6 credits from BE 303(3) [\[11\]](#), BE 306(3) [\[11\]](#), BE 307(3) [\[11\]](#) (Sem: 5-6)Select 6 credits in engineering science/design [\[26\]](#) (Sem: 5-8)Select 3 credits in agricultural/biological science [\[26\]](#) (Sem: 7-8)Select 6 credits in biological engineering [\[26\]](#) (Sem: 7-8)Select 6 credits in technical selection [\[26\]](#) (Sem: 7-8)

(Students may apply 3 credits of ROTC to the technical selection category and 3 credits to the GHA category upon completion of the ROTC program.)

FOOD AND BIOLOGICAL PROCESSING ENGINEERING OPTION: (37.5 credits)**PRESCRIBED COURSES** (16.5 credits)

BMB 211(3), CHEM 202(3), NUTR 100 GHA(1.5) (Sem: 5-6)

BE 465(3), BE 468(3), IE 424(3) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)CE 360(3) [\[11\]](#) or ME 320(3) [\[11\]](#) (Sem: 5-6)**SUPPORTING COURSES AND RELATED AREAS** (18 credits)Select 6 credits in emphasis technical elective [\[26\]](#) (Sem: 7-8)Select 6 credits in any engineering science/design [\[26\]](#) (Sem: 7-8)Select 6 credits in technical selection [\[26\]](#) (Sem: 7-8)

(Students may apply 3 credits of ROTC to the technical selection category and 3 credits to the GHA category upon completion of the ROTC program.)

NATURAL RESOURCES ENGINEERING OPTION: (36 credits)**PRESCRIBED COURSES** (21 credits)

SOILS 101 GN(3) (Sem: 1-4)

ASM 309 (3) [\[11\]](#), BE 307(3) [\[11\]](#), CE 360(3) [\[11\]](#) (Sem: 5-6)

BE 467(3), BE 477(3), BE 487(3) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)

IE 424(3) or STAT 401(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)Select 6 credits in engineering science/design [\[26\]](#) (Sem: 5-8)Select 3 credits in biological/environmental sciences [\[26\]](#) (Sem: 7-8)Select 3 credits in technical selection [\[26\]](#) (Sem: 7-8)

(Students may apply 3 credits of ROTC to the technical selection category and 3 credits to the GHA category upon completion of the ROTC program.)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.**[26]** Courses to be selected from a list approved by the Agricultural and Biological Engineering faculty. These courses must be chosen so that the engineering design and engineering science requirements for the major are met.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

R & T: Approved 5/24/2013

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

[Comments](#)

EN

Biochemistry and Molecular Biology

Penn State Berks (BMBBL)
University Park, Eberly College of Science (B M B)

Director of Curricular Affairs, Meredith Defelice, *in charge*

Students in this major apply basic principles of chemistry and physics to the study of living cells and their components to explain biology at molecular, genetic, and cellular levels. Students will develop a strong foundation in quantitative and analytical biological sciences, including molecular biology, biochemistry, enzymology, metabolism, cell biology, and molecular genetics. The Biochemistry Option is offered for students who have interests in the structures, properties and functions of macromolecules, and in the quantitative and analytical techniques used to characterize these macromolecules. The Molecular and Cell Biology Option is available to students whose interests relate to the growth, reproduction and differentiation of cells and to signaling processes that occur in multicellular systems that activate and modulate these processes. The curriculum is designed to prepare students for advanced study leading to careers in research, medicine, and education, or to secure employment in biotechnology and health-related industries, including government, academic, and private laboratories.

In order to be eligible for entrance to the Biochemistry and Molecular Biology major, a student must have: 1) attained at least a 2.00 cumulative grade-point average, and 2) completed CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), and MATH 140 GQ(4); and 3) earned a grade of C or better in each of these courses.

For the B.S. degree in Biochemistry and Molecular Biology, a minimum of 125 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
 (15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
 (Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
 (Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
 (Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 95 credits [\[86\]](#)
 (This includes 15 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses.)
 (To graduate, a grade of C or better is required in 9 credits of any BMB or MICRB 400-level course except BMB 408, BMB 442, BMB 443W, BMB 445W, BMB 448, BMB 488, BMB 496, MICRB 408, MICRB 421W, MICRB 422, MICRB 447.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 55 credits

PRESCRIBED COURSES (53 credits)
 CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), CHEM 112 GN(3) [\[1\]](#), CHEM 113 GN(1), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4), MICRB 201(3) [\[85\]](#), MICRB 202(2), PSU 016(1) (Sem: 1-2)
 BMB 251(3) [\[85\]](#), BMB 252(3) [\[85\]](#), BMB 442(3), BIOL 322(3), CHEM 210(3), CHEM 212(3), CHEM 213(2), (Sem: 3-4)
 BMB 400(2), BMB 401(3), BMB 402(3), BMB 443W(3) (Sem: 5-6)

ADDITIONAL COURSES (2 credits)
 Select 2 credits from: BMB 445W(2) or BMB 448(2) (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 40 credits

BIOCHEMISTRY OPTION: (40 credits)

PRESCRIBED COURSES: (21 credits)
 PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2) (Sem: 2-4)
 CHEM 450(3), CHEM 452(3) (Sem: 5-8)
 BMB 474(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS: (19 credits)
 Select 7-9 credits from any 400-level BMB/CHEM/MICRB course or from department list D (additional 400-level courses) with a maximum of 3 credits in BMB 408 and/or MICRB 408 and a maximum of 4 credits in BMB 488 and/or BMB 496 (Sem: 5-8)
 Select 2-3 credits in the mathematical sciences from department list B (Sem: 5-8)
 Select 7-10 credits from department list C (Sem: 5-8)

MOLECULAR AND CELL BIOLOGY OPTION: (40 credits)

PRESCRIBED COURSES: (9 credits)
 BMB 430(3), BMB 460(3) (Sem: 5-8)
 MICRB 410(3) (Sem: 5-8)

ADDITIONAL COURSES: (11-14 credits)
 Select 8 credits from: PHYS 211 GN(4), PHYS 212 GN(4), PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 1-4)
 Select 3-6 credits from: CHEM 450(3), CHEM 452(3); or BMB 428(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS: (17-20 credits)
 Select 5-6 credits from any 400-level BMB/MICRB course or from department list D (additional 400-level courses) with a total maximum of 3 credits in BMB 408 and/or MICRB 408 and a maximum of 4 credits in BMB 488 and/or BMB 496 (Sem: 5-8)
 Select 2-3 credits in the mathematical sciences from department list B (Sem: 5-8)
 Select 4-13 credits from department list C (Sem: 5-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[\[85\]](#) To graduate, a grade of C or better is required in two of the following courses: MICRB 201, BMB/MICRB 251, BMB/MICRB 252.

[\[86\]](#) To graduate, a grade of C or better is required in 9 credits of any BMB or MICRB 400-level course except BMB 442, BMB 443W, BMB 445W, BMB 448, BMB 488, BMB 496, MICRB 421W, MICRB 422, MICRB 447.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-131

Review Date: 08/23/16

UCA Revision #1: 8/2/06

SC

Bachelor of Philosophy Degree

Intercollege Program (B PH)

OFFICE OF THE VICE PRESIDENT AND DEAN FOR UNDERGRADUATE EDUCATION

The Bachelor of Philosophy degree is designed to allow students to plan their own programs in conjunction with a faculty mentor and is intended for those few students for whom the present degree requirements are restrictive and not responsive to their needs. While the educational goals of most students are adequately met by existing degree programs, those who can demonstrate that the usual requirements of conventional programs prevent them from adequately meeting their goals may apply. An important standard for admission to the Bachelor of Philosophy degree program will be the ability of students to demonstrate that their stated goals are viable and worthy of a college degree.

The faculty mentor is responsible for assisting the student in planning the program and in achieving the proposed goals. The mentor must be able to certify to the Bachelor of Philosophy Degree Committee that the student has achieved the stated goals. The basis of this certification might be a comprehensive examination (written or oral), a written report, a public seminar or performance, or the presentation of a paper to a national meeting of a professional society, etc. A faculty member may serve as mentor for only one student at any given time.

The program is administered by an intercollege committee under the Office of the Vice President and Dean for Undergraduate Education. The Bachelor of Philosophy Degree Committee is responsible for selecting the students and their faculty mentors for the program, annually examining the progress of all students in the program, and approving the completion of the degree based on the certification made by the faculty mentor.

Requirements for Admission

1. An entry interview with the candidate, the faculty mentor, and the members of the Bachelor of Philosophy Degree Committee is required prior to admission to the program. This preliminary interview provides an opportunity for the candidate to discuss and justify the intended use of the Bachelor or Philosophy degree program, and the unique circumstances that surround the applicant.
2. Second-, third-, and fourth-semester students may apply; those selected will begin their programs the following semester. Exceptions may be approved by the committee.
3. Evidence of successful completion of course work requiring independent research is required. In addition, the committee will consider the applicant's cumulative grade-point average as an index of academic performance and responsibility. Applicants must possess the capability of performing at a **3.0** minimum level.
4. Approval of the student's program by the committee is required.

Requirements for Graduation

1. Satisfactory completion of a program approved by the committee: (a) a minimum of 120 credits to include at least 18 credits at the 400 or 500 level; (b) certification by the faculty mentor; (c) and approval of a capstone, thesis or equivalent, by the faculty mentor.
2. Approval by the committee for graduation following presentation and defense of the capstone, thesis or equivalent.

Last Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-05-060

Review Date: 02/25/2014

Last updated: 2/22/10

Biological Anthropology

University Park, College of the Liberal Arts (BANTH)

PROFESSOR DOUGLAS J. KENNETT, *Head, Department of Anthropology*

(The Bachelor of Science degree in Biological Anthropology is offered by the Biological Anthropology Program in the Department of Anthropology.)

The Bachelor of Science degree provides the opportunity to develop a strong foundation in research methods, quantification, and laboratory science. It prepares students with the skills and competencies needed to pursue graduate study or careers in professions associated with biological anthropology and related fields. Students contemplating futures in biomedical or forensic sciences should consult with Penn State's Premedicine Office or the specific forensic science graduate program to make certain that additional courses in organic chemistry and physics that are required for admission are completed.

For the B.S. degree in Biological Anthropology, a minimum of 122 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

GENERAL EDUCATION: 45 credits

(13 of these credits are included in REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 23-30 credits

REQUIREMENTS FOR THE MAJOR: 67credits [\[1\]](#)

(This includes 13 credits of General Education courses; 9 credits GN courses; 4 credits GQ courses.)

PRESCRIBED COURSES (17 credits)

ANTH 002 GS(3), ANTH 021 GN(3), ANTH 045 GS;US;IL(3), BIOL 110 GN(4), STAT 200 GQ(4) (Sem: 1-6)

ADDITIONAL COURSES (50 credits)

Select an additional 18 credits in ANTH elective courses other than ANTH 001, (no more than 9 credits from 190-199, 290-299, 390-399, and 490-499 other than 297 and 497) (Sem: 1-8)

Select 15 Biological Anthropology credits from the following ranges: ANTH 401-419(3) or ANTH 460-473(3) (Sem: 3-8)

Select 8 credits from the following: BIOL 129 GN(4), BIOL 230W GN(4), BIOL 240W GN(4), or KINES 202(4) (Sem: 3-8)

Select 9 credits from the following: BMB 251(3), BMB 401(3), BMB 484(3), BMB 485(3), BIOL 141 GN(3), BIOL 411(3), or BIOL 472(3), (Sem: 3-8)

NOTE: Internships will be counted as elective credits.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

UCA Revision #1: 8/2/06

LA

Biobehavioral Health

University Park, College of Health and Human Development (BB H)
University College: Penn State Greater Allegheny, Penn State Lehigh Valley, Penn State New Kensington
World Campus

PROFESSOR THOMAS J. GOULD, *Head of the Department*

This major provides interdisciplinary training designed to integrate biological, behavioral, and social science approaches to the study of human health and illness. Emphasis is placed on the study of physical health. The goal of this major is to help students gain working familiarity with multiple perspectives, approaches, and methods needed to address and solve problems of human health and illness. Students may select courses in the supporting courses category that will fulfill requirements for admission to graduate and professional programs. This major helps prepare graduates for entry-level jobs in a range of biomedical and health-related areas, including roles as research assistants, laboratory managers, biomedical product representatives, technical support positions in biomedical and health-related fields. This major also will provide excellent preparation for advanced study in natural and social science disciplines and related professional areas such as epidemiology, public health, environmental health and safety, and human services.

For the B.S. degree in Biobehavioral Health, a minimum of 120 credits is required.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. BB H requires students to complete 24 credits for the major through courses taken at University Park, Greter Allegheny, New Kensington and through World Campus. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(22 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 credits

REQUIREMENTS FOR THE MAJOR: 97-99 credits
(This includes 21-22 credits of General Education courses: 3-4 credits of GQ courses; 9 credits of GN courses; 6 credits of GS courses; 3 credits of GHA courses.)

PRESCRIBED COURSES (31 credits)
BIOL 110 GN(4) (Sem: 1-3)
BBH 101 GHA(3) [\[1\]](#), BIOL 141 GN(3) [\[1\]](#), NUTR 251 GHA(3), PSYCH 100 GS(3) [\[1\]](#) (Sem: 1-4)
BBH 310(3) [\[1\]](#), BBH 311(3) [\[1\]](#), BBH 316(3) [\[1\]](#), BBH 411(3) [\[1\]](#), BBH 440 US;IL(3) [\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (51-53 credits)
Select 3 credits from: BIOL 133 GN(3) or BIOL 222(3) (Sem: 1-2)

Select 3-4 credits from: BIOL 230W GN(4) [\[1\]](#) or CHEM 101 GN(3) [\[1\]](#) or CHEM 110 GN(3) [\[1\]](#) or MICRB 106 GN(3) [\[1\]](#) (classes used to fulfill this requirement may not be used to fulfill the 12 credits of basic science below) (Sem: 1-4)

Select 3-4 credits from: STAT 200 GQ(4) [\[1\]](#) or STAT 250 GQ(3) [\[1\]](#) (Sem: 1-2)

Select 3 credits from: BBH 301W(3), PHIL 110 GH(3), PHIL 132 GH(3), RLST 131 GH(3) (Sem: 5-8)

Select 12 credits from: CHEM 110 GN (3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-2)
CHEM 202(3) or CHEM 210(3), CHEM 203(3) or CHEM 213(2), CHEM 212(3), MICRB 106 GN(3), MICRB 107 GN(1), PSYCH 260(3) (Sem: 3-4)
ANSC 479(3), ANTH 021 GN(3), ANTH 022 GN(3), ANTH 216 GN;GS(3), BMB 211(3), BIOL 155 GN(3), BIOL 129 GN(4), BIOL 142(1), BIOL 220W GN(4), BIOL 230W GN(4), BIOL 240W GN(4), BIOL 422(3), BIOL 409(3), BIOL 479(3), EARTH 100 GN(3), EARTH 103 GN(3), EGEE 101 GN(3), EGEE 102 GN(3), EMSC 101 US;IL(3), FDSC 404(3), FDSC 405(3), FDSC 406(3), FDSC 407(2), FDSC 408(3), GEOG 110 GN(3), GEOG 314 GN(3), PHYS 250 GN(4), PHYS 251 GN(4), PSYCH 460(3), PSYCH 461(3), PSYCH 462(3), PSYCH 464(3), PSYCH 470(3), PSYCH 473(3), VBSC 211 GN(3), VBSC 230(3), VBSC 231(3) (Sem: 5-8)

Select 15 credits from (at least 6 credits must be at the 400 level) [\[1\]](#): BBH 203(3), BBH 251 US(3), BBH 302 US(3), BBH 305 IL(3), BBH 315 US(3), BBH 324(3), BBH 368(3), BBH 390A(3), BBH 402 IL(3), BBH 407 IL(3), BBH 410(3), BBH 416(3), BBH 417(3), BBH 432(3), BBH 446(3), BBH 451(3), BBH 452 US(3), BBH 458 GS(3), BBH 468(3), BBH 469(3), BBH 470(3), BBH 490(3) (Sem: 5-8)

Select 9 credits from: CSD 100 GHA;US(3), CSD 101 GHA;US(1.5), CSD 146 US;IL(3), CSD 218(3), CSD 230(3), CSD 269 GH;US;IL(3), HPA 057 GHA(3), HPA 101(3), HPA 310(3), HDFS 229 GS(3), HDFS 239 GS(3), HDFS 249 GS(3), HDFS 250 US(3), HDFS 302A(3), HDFS 311(3), HDFS 315 US(3), HDFS 405 US(3), HDFS 416 US(3), HDFS 418(3), HDFS 428(3), HDFS 429(3), HDFS 431(3), HDFS 433(3), HDFS 445(3), HDFS 468(3), KINES 100(3), KINES 101(3), KINES 165(3), KINES 180(3), KINES 203(3), KINES 304(1), KINES 356(3), KINES 358(1), NUTR 111 GH;US(3), NUTR 358(2), NUTR 360(3), PSYCH 212 GS(3), PSYCH 243 GS(3), PSYCH 270(3) (Sem: 5-8)

Select 3 credits from: HDFS 129 GS(3), HDFS 229 GS(3), HDFS 239 GS(3), or HDFS 249 GS(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)
Select 3 credits in health promotion at 400 level from approved list, in consultation with adviser (Sem: 5-8)
Select 12 credits in University-wide offerings from approved list, in consultation with advisor (Students may apply 6 credits of ROTC.) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-02-031

Review Date: 10/13/2015

UCA Revision #1: 9/20/06

HH

Dept head updated: 8/24/16

Business Economics

Penn State Erie, The Behrend College (BECON)

Business Economics is a quantitatively-oriented program of study in applied economics. Leading to a B.S. degree, this major combines in-depth study of economics with a general business background, the latter including courses in accounting, finance, management, management information systems, marketing, and quantitative business analysis. Students may choose upper-division economics courses in business and economic forecasting, econometrics, economic theory, industrial organization, international economics, labor economics, managerial economics, and urban and regional economics. Use of computers as analytical and problem-solving tools is emphasized in the program. The major also includes several non-business supporting areas of study from which students may choose courses.

Entrance to Major Requirements:

Entry to the Business Economics major requires the completion of 5 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 015 GWS(3) or ENGL 030 GWS(3); MATH 110 GQ(4) or MATH 140 GQ(4); STAT 200 GQ(4) or SCM 200(4), and a 2.00 or higher cumulative grade-point average.

For the B.S. Degree in Business Economics, a minimum of 120 credits is required.

Each student enrolled in this major must earn at least a grade of C in each 300- and 400-level course.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 2 credits

REQUIREMENTS FOR THE MAJOR: 88 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (43 credits)

ACCTG 211(4), ECON 102 GS(3), ECON 104 GS(3), ENGL 202D GWS(3) (Sem: 3-4)
FIN 301(3)[1], MGMT 301(3)[1], MIS 204(3), MKTG 301(3)[1], SCM 310(3)[1] (Sem: 3-6)
ECON 302 GS(3)[1], ECON 304 GS(3)[1], ECON 485(3)[1] (Sem: 5-6)
ECON 470(3)[1] (Sem: 5-8)
MGMT 471W(3)[1] (Sem: 7-8)

ADDITIONAL COURSES (24 credits)

[Some courses in this category have prerequisites that are not required in the program.]

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)
SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)
BA 241(2) and BA 242(2) or BA 243(4) (Sem: 3-6)
Select 12 credits from ECON 342(3)[1], ECON 410(3)[1], ECON 430(3)[1], ECON 442(3)[1], ECON 481(3)[1], or ECON 482(3)[1] (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 9 credits of 300- or 400-level economics or other business courses [1] (see school list of approved courses) (Sem: 5-8)
Select 12 credits from the approved electives course list for the major. (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2010

Blue Sheet Item #: 39-01-055

Review Date: 08/24/2010

UCA Revision #1: 8/3/06

UCA Revision #2: 7/26/07

BD

Biomedical Engineering

University Park, College of Engineering (BME)

PROFESSOR CHENG DONG, *Head of the Department of Biomedical Engineering*

The Biomedical Engineering curriculum emphasizes the continuous integration of classical and modern engineering principles with the life sciences and health care. Biomedical Engineers apply these skills to innovation in the health care industry, basic biological sciences, and the underpinning of medical practice.

Consistent with the mission of Penn State University and the College of Engineering, the Penn State Bachelor of Science program in Biomedical Engineering aims to create world-class engineers who will, after graduation, contribute to social and economic development through the application of engineering to the solution of problems in medicine and biology.

Program Educational Objectives

Three to five years after graduation, we expect our graduates to be:

- employed in industry and government positions which include, but are not limited to, research and development, regulation, manufacturing, quality assurance and sales and marketing, or,
- enrolled in graduate school, continuing education, or other professional development programs related to biomedical sciences and engineering, or,
- enrolled in medical school, dental school, or other health-related professional training programs.

Program Outcomes (Student Outcomes)

Upon graduation from the Biomedical Engineering program, students will have:

1. An ability to apply knowledge of advanced mathematics, (including differential equations and statistics), science, and engineering to solve problems at the interface of engineering and biology
2. An ability to design and conduct experiments, as well as to analyze and interpret data from living and non-living systems
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. An ability to function on multi-disciplinary teams
5. An ability to identify, formulate, and solve engineering problems
6. An understanding of professional and ethical responsibility
7. An ability to communicate effectively
8. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. A recognition of the need for, and an ability to engage in, life-long learning
10. A knowledge of contemporary issues
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
12. An understanding of physics, chemistry, and of physiology at molecular, cellular and organ levels
13. An ability to address problems associated with the interaction between living and non-living materials and systems

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Biomedical Engineering, a minimum of 130-131 credits are required. The baccalaureate program in Biomedical Engineering at University Park is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Students in residence at the Commonwealth campuses may satisfy the course requirements for semesters 1-3. They should then transfer to University Park to begin studies in their major beginning with semester 4.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of the *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 112-113 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 89 credits

PRESCRIBED COURSES (72 credits)

EDSGN 100(3) (Sem: 1-2)
CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-2)
MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#) (Sem: 1-2)
CMPSC 200 GQ(3), EMCH 210(5), MATH 230(4), MATH 251(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#) (Sem: 3-4)
BME 201(3) [\[1\]](#) (Sem: 4)
BME 301(4) [\[1\]](#), BME 303(3) [\[1\]](#), BME 313(3) [\[1\]](#), BME 401(3) [\[1\]](#), BME 402(3) [\[1\]](#), BME 403(1) (Sem: 5-6)
ENGL 202C GWS(3) (Sem: 5-6)
BME 429(2), BME 440(1), BME 450(3) (Sem: 7-8)

ADDITIONAL COURSES (14 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)
ECON 102 GS(3), or ECON 104 GS(3) (Sem: 1-2)
BIOL 141 GN(3) [\[1\]](#), BIOL 142(1) [\[1\]](#), or BIOL 240W(4) [\[1\]](#) (Sem: 3-4)
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits of Science or Engineering Elective courses from departmental list (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 23-24 credits

BIOCHEMICAL OPTION: (24 credits)

PRESCRIBED COURSES (9 credits)
BME 409(3), BME 413(3) (Sem: 5-6)
BME 423(3) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)
CHEM 202(3) or CHEM 210(3) (Sem: 4-6)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 9 credits from Biochemical Option department list (Sem: 6-8)
Select 3 credits from Related Electives department list (Sem: 6-8)

MEDICAL IMAGING AND DEVICES OPTION: (23 credits)

PRESCRIBED COURSES (7 credits)
EE 210(4) (Sem: 3-4)
BME 406(3) (Sem: 5-6)

ADDITIONAL COURSES (4 credits)
CMPEN 271(3) and CMPEN 275(1) or CMPEN 270(4) or EE 310(4) or EE 330(4) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 6 credits from the Related Electives department list (Sem: 6-8)
Select 6 credits from Medical Imaging and Device Option department list (Sem: 7-8)

BIOMATERIALS OPTION: (24 credits)

PRESCRIBED COURSES (12 credits)
MATSE 201(3), BME 409(3), BME 443(3) (Sem: 5-6)
BME 446(3) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)
CHEM 202(3) OR CHEM 210(3) (Sem: 4-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 3 credits from Related Electives department list (Sem: 6-8)
Select 6 credits from Biomaterials Option department list (Sem: 7-8)

BIOMECHANICS OPTION: (24 credits)

PRESCRIBED COURSES (9 credits)
EMCH 212(3), EMCH 315(2), EMCH 316(1) (Sem: 4-6)
BME 409(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (15 credits)
Select 9 credits from Biomechanics Option department list (Sem: 6-8)
Select 6 credits from Related Electives department list (Sem: 6-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-03-040

Review Date: 11/19/2013

R & T: Approved 5/24/2013

UCA Revision #1: 8/2/06
UCA Revision #2: 7/26/07

EN

Biology

Penn State Erie, The Behrend College (BIOBD)

The curriculum in Biology is designed to provide students with a strong background in the biological sciences. It provides preparation for students who intend to secure advanced degrees through graduate study, students who intend to prepare for careers in medicine or health-related fields, and students preparing for careers with companies or agencies requiring employees with biological backgrounds. The curriculum has six options allowing students to choose an area of specialization that will best meet their career goals. In addition to selecting an option, students are strongly encouraged to participate in faculty-supervised research. The options are *General Biology* - various areas of modern biology; *Ecology, Evolution, and Behavior* - theoretical, practical, and applied ecology and evolution of plants and animals; *Genetics and Developmental Biology* - genetics and developmental biology of plants and animals; *Molecular and Cellular Biology and Biochemistry* - molecular and cellular mechanisms of biology; *Medical Technology* - prepares students for careers in clinical laboratories; and *Health Professions* - prepares students for careers in medicine and veterinary sciences; this option also allows exceptional students, who gain early admission to a professional school, to fulfill option requirements with a set number of academic credits taken during the first professional year.

Entrance Requirement: In order for entrance to the Biology major, a student must have: 1) attained at least a 2.00 cumulative grade point average; 2) completed BIOL 110 GN(4) and earned a grade of C or better; and 3) completed at least one of the following courses with a grade of C or better: BIOL 220W GN(4), or BIOL 240W GN(4).

For the B.S. degree in Biology, a minimum of 124 credits is required. Each student must earn at least a grade of C in each 200-, 300-, and 400-level BIOL, BMB, MICRB, PPEN, and WFS course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 97-99 credits
(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 41 credits

PRESCRIBED COURSES (41 credits)
CHEM 110 GN(3), CHEM 111 GN(l), CHEM 112 GN(3), CHEM 113 GN(l) (Sem: 1-2)
BIOL 110 GN(4) [\[1\]](#), BIOL 220W GN(4) [\[1\]](#), BIOL 230W GN(4) [\[1\]](#), BIOL 240W GN(4) [\[1\]](#), MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-4)
ENGL 202C GWS(3), STAT 250 GQ(3) (Sem: 3-6)
BIOL 322(3) [\[1\]](#) (Sem: 5-6)

REQUIREMENTS FOR THE OPTION: 56-58 credits

ECOLOGY, EVOLUTION, AND BEHAVIOR OPTION: (56 credits)
Students can select courses in theoretical or applied ecology, evolution, field biology and animal behavior to build strength in ecological science. The option prepares students for graduate study in ecology and evolution, or careers in zoo science, environmental consulting, environmental management, environmental education or positions with regulatory agencies.

PRESCRIBED COURSES (3 credits)
BIOL 427(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (26-30 credits)
BIOL 402(3) or STAT 461(3) or STAT 462(3) or STAT 464(3) or STAT 466(3) (Sem: 5-8)
Select 6-8 credits from one of the following sequences:
a. CHEM 202(3), CHEM 203(3) (Sem: 3-4)
b. CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)
Select 8-10 credits from one of the following sequences:
a. PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 5-8)
b. PHYS 211 GN(4), PHYS 212 GN(4); PHYS 213 GN(2) or PHYS 214 GN(2) (Sem: 5-8)
Select 9 credits from the following:
BIOL 428(3) [\[1\]](#), BIOL 429(3) [\[1\]](#), BIOL 435(3) [\[1\]](#), BIOL 438(3) [\[1\]](#), BIOL 446(3) [\[1\]](#), BIOL 463(3) [\[1\]](#) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (23-27 credits)
Select 7 credits in GEOG 160 GS(3), GEOG 161(1), and GEOG 363(3) and 10-14 credits from school approved list (Sem: 1-8)
OR
Select 17-21 credits from school approved list (Sem: 1-8)
Select 6 credits of 400-level BIOL, BMB, MICRB, PPEN, or WFS [\[1\]](#) courses excluding BIOL 400 and any courses numbered 494, 495, 496, 497, 498, or 499 (Sem: 5-8)

GENERAL BIOLOGY OPTION: (56 credits)
Students can select courses from a variety of areas of contemporary biology. The option provides the flexibility to enable students to tailor their program for graduate study in many fields of biology or careers requiring broad backgrounds and diverse skills in the biological sciences.

PRESCRIBED COURSES (3 credits)
BIOL 427(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (14-18 credits)
Select 6-8 credits from one the following sequences:
a. CHEM 202(3), CHEM 203(3) (Sem: 3-4)
b. CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)
Select 8-10 credits from one of the following sequences:
a. PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 5-8)
b. PHYS 211 GN(4), PHYS 212 GN(4); PHYS 213 GN(2) or PHYS 214 GN(2) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (35-39 credits)
Select 20-24 credits from school approved list (Sem: 1-8)
Select 15 credits of 400-level BIOL, BMB, MICRB, PPEN, or WFS [\[1\]](#) courses excluding BIOL 400 and any courses numbered 494, 495, 496, 497, 498, or 499 (Sem: 5-8)

GENETICS AND DEVELOPMENTAL BIOLOGY OPTION: (56 credits)
Students can select courses to develop strengths in various areas of transmission, medical, population or molecular genetics and/or study the developmental process at the organismal, histological or molecular levels. The option prepares students for admission to professional programs in the health sciences, graduate programs in genetic counseling, plant or animal breeding, developmental biology, or careers in research or biotechnology.

PRESCRIBED COURSES (16 credits)

CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)

MICRB 201(3)^[1], MICRB 202(2)^[1] (Sem 3-6)BIOL 427(3)^[1] (Sem: 7-8)**ADDITIONAL COURSES** (17-19 credits)

Select 9 credits from the following:

BMB 406(3)^[1], BIOL 410(3)^[1], BIOL 422(3)^[1], BIOL 428(3)^[1], BIOL 430(3)^[1], BIOL 460(3)^[1], (Sem: 5-8)

Select 8-10 credits from one of the following sequences:

a. PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 5-8)

b. PHYS 211 GN(4), PHYS 212 GN(4); PHYS 213 GN(2) or PHYS 214 GN(2) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (21-23 credits)

Select 15-17 credits from school approved list (Sem: 1-8)

Select 6 credits of 400-level BIOL, BMB, MICRB, PPEM, or WFS^[1] courses excluding BIOL 400 and any courses numbered 494, 495, 496, 497, 498, or 499 (Sem: 5-8)**MEDICAL TECHNOLOGY OPTION:** (56-58 credits)

Students spend approximately twelve months at an affiliated hospital^[12] during their senior year to complete the clinical phase of their baccalaureate studies. A fixed number of spaces are available on a competitive basis of grade-point average and hospital approval. The Bachelor of Science degree in Biology is awarded upon successful completion of the clinical study. The graduate is also eligible to take the national examination for certification and registry as a medical technologist.

PRESCRIBED COURSES (44 credits)MICRB 201(3)^[1], MICRB 202(2)^[1] (Sem: 3-4)

PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 5-6)

MICRB 405A(8)^[1], MICRB 405B(1)^[1], MICRB 405C(6)^[1], MICRB 405D(5)^[1], MICRB 405E(7)^[1], MICRB 405F(3)^[1], MICRB 408(1)^[1] (Sem: 7-8)**ADDITIONAL COURSES** (8-10 credits)

Select 8-10 credits from one the following sequences:

a. CHEM 202(3), CHEM 203(3), CHEM 221(4) (Sem: 3-4)

b. CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (4 credits)

Select 1 credit from approved list (Sem: 1-6)

Select 3 credits of 400-level B M B, BIOL, MICRB from:

BMB 402(3)^[1], BMB 406(3)^[1], BIOL 460(3)^[1], BIOL 472(3)^[1], or MICRB 415(3)^[1] (Sem: 5-6)**MOLECULAR AND CELLULAR BIOLOGY AND BIOCHEMISTRY OPTION:** (56 credits)

Students can select courses to develop strengths in the study of biology at the cellular and molecular levels, including basic metabolism and its regulations, DNA recombinant technology, bioinformatics and genomics. The option prepares students for admission to professional programs in the health sciences, graduate study, or careers in biotechnology or research.

PRESCRIBED COURSES (26 credits)CHEM 210(3), CHEM 212(3), CHEM 213(2), MICRB 201(3)^[1], MICRB 202(2)^[1] (Sem 3-6)BMB 401(3)^[1], BMB 402(3)^[1], BMB 403(1)^[1], BMB 406(3)^[1] (Sem: 5-8)BIOL 427(3)^[1] (Sem: 7-8)**ADDITIONAL COURSES** (11-13 credits)

Select 8-10 credits from one of the following sequences:

a. PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 5-8)

b. PHYS 211 GN(4), PHYS 212 GN(4); PHYS 213 GN(2) or PHYS 214 GN(2) (Sem: 5-8)

Select 3 credits from BMB 465(3)^[1], BIOL 404(3)^[1], BIOL 439(3)^[1], BIOL 441(3)^[1], MICRB 410(3)^[1], MICRB 412(3)^[1], or MICRB 415(3)^[1] (Sem: 5-8)**SUPPORTING COURSES AND RELATED AREAS** (17-19 credits)

Select 14-16 credits from school approved list (Sem: 1-8)

Select 3 credits of 400-level BIOL, BMB, MICRB, PPEM, or WFS^[1] courses excluding BIOL 400 and any courses numbered 494, 495, 496, 497, 498, or 499 (Sem: 5-8)**HEALTH PROFESSIONS OPTION:** (56 credits)

Students can prepare for the rigors of advanced health professions education by following the course of study outlined in this option. This option is also provided for exceptional students who are admitted into a "3+4" accelerated or early acceptance program at an approved or affiliated professional school.

Students are granted 21 credits toward the Bachelor of Science degree following the successful completion of the first professional academic year. The Health Professions Committee will work with such students to develop an appropriate program of study.

PRESCRIBED COURSES (29 credits)MICRB 201(3)^[1], MICRB 202(2)^[1] (Sem: 1-2)

CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)

BMB 402(3)^[1], BMB 403(1)^[1], BIOL 421(4)^[1], BIOL 472(3)^[1], BIOL 473(2)^[1] (Sem: 5-8)BIOL 427(3)^[1] (Sem: 7-8)**ADDITIONAL COURSES** (11-13 credits)

Select 8-10 credits from one of the following sequences:

a. PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 5-8)

b. PHYS 211 GN(4), PHYS 212 GN(4); PHYS 213 GN(2) or PHYS 214 GN(2) (Sem: 5-8)

Select 3 credits from: BMB 401(3)^[1] or CHEM 472(3)^[1] (Sem: 5-8)**SUPPORTING COURSES AND RELATED AREAS** (14-16 credits)

Select 11-13 credits from school approved list (Sem: 1-8)

Select 3 credits of 400-level BIOL, BMB, MICRB, PPEM, or WFS^[1] courses excluding BIOL 400 and any courses numbered 494, 495, 496, 497, 498, or 499 (Sem: 5-8)

^[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

^[12]Current affiliation is with St. Vincent Health Center, School of Medical Technology, Erie, PA.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-05-011

Review Date: 02/24/2015

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

BD

Biology

Abington College (BIOAB)

Altoona College (BIOAL)

Berks College (BIOBL)

Capital College (BIOCA)

University Park, Eberly College of Science (BIOL)

University College, Penn State Beaver, Penn State Brandywine, Penn State Schuylkill, Penn State Worthington Scranton, Penn State York (BIOCC)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

Carla Hass, Person-In-Charge

The curriculum in Biology is planned for preparation for professions requiring competence in biological science or for gaining an understanding of the world of living things. The professional group includes students who intend to secure advanced degrees through graduate study, students who are interested in work with various governmental agencies or industries having biological responsibilities, and students who want to prepare for careers in medicine or other health-related professions. Students whose interests are not professional select the curriculum because its broad approach can result in an educated view of the structure and function of living things. Achievement of these goals, including a special interest in a particular area of biology, can be met by selecting one of five options offered by the Department of Biology that will lead to the B.S. degree in Biology. The options and their key areas are 1) Plant Biology--morphology, systematics, and physiology of plants and fungi; 2) Ecology--behavior, and population and community biology of plants and animals; 3) General Biology--all aspects of modern biology; 4) Genetics and Developmental Biology--genetics, genetic engineering, and plant and animal development; 5) Neuroscience--development, biochemistry, physiology and aging of the central and peripheral nervous system; 6) Vertebrate Physiology--pre-medicine, pre-dentistry, pharmacology, and animal physiology.

In order to be eligible for entrance to the Biology major, a student must have: 1) attained at least a 2.00 cumulative grade point average; 2) completed BIOL 110 GN(4), CHEM 110 GN(3), MATH 140 GQ(4), and earned a grade of C or better in each of these courses; and 3) completed at least one of the following courses with a grade of C or better: BIOL 220W GN(4), BIOL 230W GN(4), or BIOL 240W GN(4).

TO VIEW THE [Biology Minor \(BIOL\)](#)

For the B.S. degree in Biology, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 94 credits

(This includes 15 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR MAJOR (ALL OPTIONS): 40-44 credits

PRESCRIBED COURSES (32 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), CHEM 112 GN(3) [\[1\]](#), CHEM 113 GN(1), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) (Sem: 1-2)
BIOL 110 GN(4) [\[1\]](#), BIOL 220W GN(4) [\[1\]](#), BIOL 230W GN(4) [\[1\]](#), BIOL 240W GN(4) [\[1\]](#) (Sem: 1-4)

ADDITIONAL COURSES (8-12 credits)

PHYS 250 GN(4), PHYS 251 GN(4); or PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2) (Sem: 5-6)

REQUIREMENTS FOR THE OPTION: 50-54 credits

ECOLOGY OPTION: (50-54 credits)

ADDITIONAL COURSES (30-33 credits)

CHEM 202(3), CHEM 203(3); or CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)
Select 3-4 credits from STAT 200 GQ(4) or STAT 240 GQ(3) or STAT 250 GQ(3) (Sem: 3-4)
Select 3 credits from STAT 462(3) or STAT 464(3) (Sem: 7-8)

Select a minimum of 18 credits of 400-level biology courses, with at least 3 credits from each of the following groups (courses in Group IV--except BIOL 496, SC 295, SC 395, SC 495--may be used to satisfy requirements in other groups) (Sem: 5-8)

Group I: BIOL 412(3), BIOL 419(3), BIOL 435(3), BIOL 436(3), BIOL 444(3), BIOL 450W(3-5), BIOL 463(3), BIOL 482(3-4), BIOL 499A IL(3)

Group II: BIOL 414(3), BIOL 427(3), BIOL 428(3), BIOL 429(3), BIOL 448(3), BIOL 464(3), BIOL 474(3)

Group III: BIOL 406(3), BIOL 415(3), BIOL 417(4), BIOL 446(3), PPEN 425(4)

Group IV: BIOL 414(3), BIOL 417(4), BIOL 419(3), BIOL 444(3), BIOL 448(3), BIOL 450W(3-5), BIOL 482(3-4), BIOL 496(3), BIOL 499A IL(3), PPEN 425(4), SC 295(1-3), SC 395(1-3), SC 495(1-3) (A maximum of 3 credits of BIOL 496 or 4 credits of SC 295, SC 395, SC 495 may be used to fulfill the 18-credit minimum in the 400-level biology course requirement.)

SUPPORTING COURSES AND RELATED AREAS (17-24 credits)

Select 17-24 credits from department list (Sem: 1-8)

GENERAL BIOLOGY OPTION: (50-54 credits)

ADDITIONAL COURSES (27-30 credits)

CHEM 202(3), CHEM 203(3); or CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)
Select 3-4 credits from STAT 200 GQ(4), STAT 240 GQ(3), or STAT 250 GQ(3) (Sem: 3-4)

Select a minimum of 18 credits of 400-level biology courses, with at least 3 credits from each of the following groups (each course may be used to satisfy a requirement in only one group) (Sem: 5-8)

Group I -- BIOL 407(3), BIOL 414(3), BIOL 441(3), BIOL 443(3), BIOL 444(3), BIOL 446(3), BIOL 448(3), BIOL 499A IL(3), HORT 407(3), PPEN 416(2-4), PPEN 425(4)

Group II -- BIOL 405(3), BIOL 411(3), BIOL 414(3), BIOL 417(4), BIOL 420(3), BIOL 421(4), BIOL 425(4), BIOL 427(3), BIOL 428(3), BIOL 438(3), BIOL 443(3), BIOL 460(3), BIOL 474(3)

Group III -- B M B 400(2-3), B M B 450(2), BIOL 404(3), BIOL 405(3), BIOL 407(3), BIOL 411(3), BIOL 416(3), BIOL 422(3), BIOL 426(3), BIOL 428(3), BIOL 430(3), BIOL 432(3), BIOL 439(3), BIOL 443(3), BIOL 448(3), BIOL 460(3), BIOL 499A IL(3), HORT 407(3)

Group IV -- BIOL 406(3), BIOL 412(3), BIOL 414(3), BIOL 415(3), BIOL 417(4), BIOL 419(3), BIOL 428(3), BIOL 429(3), BIOL 435(3), BIOL 436(3), BIOL 444(3) BIOL

446(3), BIOL 448(3), BIOL 450W(3-5), BIOL 463(3), BIOL 464(3), BIOL 474(3), BIOL 499A IL(3),

Group V -- BIOL 404(3), BIOL 406(3), BIOL 409(3), BIOL 411(3), BIOL 413(3), BIOL 416(3), BIOL 421(4), BIOL 426(3), BIOL 430(3), BIOL 432(3), BIOL 437(4), BIOL 443(3), BIOL 446(3), BIOL 460(3), BIOL 469(3), BIOL 470(3), BIOL 472(3), BIOL 479(3)

Group VI -- BIOL 400(1-3), BIOL 407(3), BIOL 414(3), BIOL 417(4), BIOL 419(3), BIOL 421(4), BIOL 437(4), BIOL 439(3), BIOL 444(3), BIOL 448(3), BIOL 450W(3-5), BIOL 461(3), BIOL 473(2), BIOL 496(1-3), PPEM 425(4), SC 295(1-3), SC 395(1-3), SC 495(1-3)

SUPPORTING COURSES AND RELATED AREAS (20-27 credits)
Select 20-27 credits from department list (Sem: 1-8)

GENETICS AND DEVELOPMENTAL BIOLOGY OPTION: (50-54 credits)

PRESCRIBED COURSES (19 credits)
CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)
BIOL 322(3), BIOL 430(3) (Sem: 5-6)
B M B 401(2), B M B 402(3) (Sem: 5-8)

ADDITIONAL COURSES (17-21 credits)
Select 2-5 credits from MATH 220 GQ(2-3), MATH 231(2), MICRB 201(3), MICRB 202(2) (Sem: 3-6)
Select 3-4 credits from STAT 200 GQ(4), STAT 240 GQ(3), STAT 250 GQ(3), or STAT 319(3) (Sem: 5-6)

Select a minimum of 12 credits of 400-level courses, with at least 6 credits from Group I, 3 credits from Group II, and 3 credits from Group III (Sem: 5-8)

Group I -- B M B 400(2-3), B M B 450(2), BIOL 404(3), BIOL 405(3), BIOL 407(3), BIOL 411(3), BIOL 413(3), BIOL 416(3), BIOL 422(3), BIOL 426(3), BIOL 427(3), BIOL 428(3), BIOL 432(3), BIOL 437(4), BIOL 439(3), BIOL 443(3), BIOL 448(3), BIOL 460(3), BIOL 469(3), HORT 407(3), MICRB 410(3)

Group II -- BIOL 405(3), BIOL 411(3), BIOL 414(3), BIOL 417(4), BIOL 420(3), BIOL 421(4), BIOL 425(4), BIOL 427(3), BIOL 428(3), BIOL 438(3), BIOL 443(3), BIOL 460(3), BIOL 474(3)

Group III -- BIOL 400(1-3), BIOL 407(3), BIOL 437(4), BIOL 439(3), BIOL 448(3), BIOL 461(3), BIOL 473(2), BIOL 496(1-3), BIOL 499A IL(3), B M B 442(3), PPEM 425(4), SC 295(1-3), SC 395(1-3), SC 495(1-3)

SUPPORTING COURSES AND RELATED AREAS (10-18 credits)
Select 10-18 credits from department list (Sem: 1-8)

NEUROSCIENCE OPTION: (50-54 credits)

PRESCRIBED COURSES (19 credits)
B M B 401(2), B M B 402(3) (Sem: 5-8)
BIOL 469(3), BIOL 470(3) (Sem: 5-8)
CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)

ADDITIONAL COURSES (15-16 credits)
Select 3-4 credits from STAT 200 GQ(4), STAT 240 GQ(3), or STAT 250 GQ(3) (Sem: 3-4)

Select a minimum of 12 credits of 400-level biology courses, with at least 6 credits from Group I, 3 credits from Group II, and 3 credits from Group III (Sem: 5-8)

Group I -- B M B 400(2-3), BIOL 404(3), BIOL 409(3), BIOL 411(3), BIOL 413(3), BIOL 421(4), BIOL 426(3), BIOL 430(3), BIOL 437(4), BIOL 443(3), BIOL 460(3), BIOL 472(3), BIOL 473(2), BIOL 479(3) (may select up to 6 credits from department list)

Group II -- BIOL 405(3), BIOL 411(3), BIOL 414(3), BIOL 417(4), BIOL 420(3), BIOL 421(4), BIOL 425(4), BIOL 427(3), BIOL 428(3), BIOL 438(3), BIOL 443(3), BIOL 460(3), BIOL 474(3)

Group III -- BIOL 400(1-3), BIOL 414(3), BIOL 417(4), BIOL 419(3), BIOL 421(4), BIOL 437(4), BIOL 439(3), BIOL 444(3), BIOL 448(3), BIOL 450W(3-5), BIOL 461(3), BIOL 473(2), BIOL 496(1-3), BIOL 499A IL(3), SC 295(1-3), SC 395(1-3), SC 495(1-3)

SUPPORTING COURSES AND RELATED AREAS (15-20 credits)
Select 15-20 credits from department list (Sem: 1-8)

PLANT BIOLOGY OPTION: (50-54 credits)

PRESCRIBED COURSES (22 credits)
CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)
B M B 401(2), B M B 402(3), BIOL 407(3), BIOL 414(3), BIOL 441(3) (Sem: 5-8)

ADDITIONAL COURSES (12-13 credits)
Select 3-4 credits from STAT 200 GQ(4), STAT 240 GQ(3), STAT 250 GQ(3), or an advanced statistics course (Sem: 3-4)

Select a minimum of 9 credits of 400-level biology courses, with at least 6 credits from Group I and 3 credits from Group II (Sem: 5-8)

Group I -- BIOL 413(3), BIOL 427(3), BIOL 430(3), BIOL 443(3), BIOL 444(3), BIOL 446(3), BIOL 448(3), BIOL 499A IL(3), BIOTC 459(3), HORT 407(3), PPEM 416(2-4), PPEM 425(4)

Group II -- BIOL 400(1-3), BIOL 414(3), BIOL 419(3), BIOL 439(3), BIOL 444(3), BIOL 448(3), BIOL 450W(3-5), BIOL 461(3), BIOL 496(1-3), BIOL 499A IL(3), SC 295(1-3), SC 395(1-3), SC 495(1-3)

SUPPORTING COURSES AND RELATED AREAS (15-20 credits)
Select 15-20 credits from department list (Sem: 1-8)

VERTEBRATE PHYSIOLOGY OPTION: (50-54 credits)

PRESCRIBED COURSES (18 credits)
CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)
B M B 401(2), B M B 402(3), BIOL 472(3), BIOL 473(2) (Sem: 5-8)

ADDITIONAL COURSES (15-16 credits)
Select 3-4 credits from STAT 200 GQ(4), STAT 240 GQ(3), or STAT 250 GQ(3) (Sem: 5-8)

Select a minimum of 12 credits of 400-level courses, with at least 6 credits from Group I, 3 credits from Group II, and 3 credits from Group III (Sem: 5-8)

Group I -- BIOL 404(3), BIOL 406(3), BIOL 409(3), BIOL 411(3), BIOL 412(3), BIOL 413(3), BIOL 416(3), BIOL 421(4), BIOL 426(3), BIOL 430(3), BIOL 432(3), BIOL 437(4), BIOL 443(3), BIOL 446(3), BIOL 460(3), BIOL 469(3), BIOL 470(3), BIOL 479(3) (may select up to 6 credits from department list)

Group II -- BIOL 405(3), BIOL 411(3), BIOL 414(3), BIOL 417(4), BIOL 420(3), BIOL 421(4), BIOL 425(4), BIOL 427(3), BIOL 428(3), BIOL 438(3), BIOL 443(3), BIOL 460(3), BIOL 474(3)

Group III -- BIOL 400(1-3), BIOL 414(3), BIOL 417(4), BIOL 419(3), BIOL 421(4), BIOL 437(4), BIOL 439(3), BIOL 444(3), BIOL 448(3), BIOL 450W(3-5), BIOL 461(3), BIOL 473(2), BIOL 496(2), BIOL 499A IL(3), SC 295(1-3), SC 395(1-3), SC 495(1-3)

SUPPORTING COURSES AND RELATED AREAS (16-21 credits)
Select 16-21 credits from department list (Sem: 1-8)

Integrated B.S. in Biology/M.Ed. in Curriculum and Instruction

This Integrated Undergraduate/Graduate (IUG) degree program combines the Bachelor of Science in Biology with the Master of Education in Curriculum and Instruction, Science Education emphasis. The program is designed to be completed in five years. The program enables highly qualified and motivated students to delve deeply into a scientific content area and to pursue graduate level preparation in the theory and practice of teaching. Most students in this option intend to seek Pennsylvania teacher certification, and a semester of student teaching comprises part of their final year of studies. The IUG may also be suitable for a student who does not need to become certified, because they intend to teach in a private secondary school or a non-formal educational setting; in such cases, the second graduate semester will be a program of studies determined through consultation with the graduate advisor and customized for the student's specific needs.

For specific instructions on applying to the program, please consult the "Application Process" section of the IUG description for the Biology B.S. degree in the *Undergraduate Bulletin*. Application materials to be submitted include an undergraduate transcript, statement of purpose, draft plan of study, two letters of recommendation, and concurrent submission of an application for master's study to the graduate program in Curriculum and Instruction, Science Education emphasis area. Additional details about the graduate application procedure can be found above in the section, "Admissions Requirements."

IUG students fulfill all degree requirements for a B.S. in the Eberly College of Science. If a student chooses to leave the program without completing M.Ed. requirements, he or she may still receive the relevant B.S. degree, after all B.S. requirements are completed.

For the M.Ed. degree, students must earn at least 30 credits at the 400/500 level, at least 18 of them at the 500 level. One graduate semester is usually devoted to full time student teaching. Additional graduate coursework is completed in a second semester. Courses required for the M.Ed. degree include a course in learning theory (e.g., SCIED 552(3)), a course in research methods (e.g., SCIED 558(3)), a course in curriculum (e.g., SCIED 550), and a course in research ethics (C I 590(1)).

Students pursuing teacher certification (the usual option) additionally complete a 500-level EDTHP course (3), C I 595(6), and C I 496(6). SCIED 558(3), C I 496(6), and C I 595(6) comprise the student-teaching semester course load. Students who are not pursuing teacher certification substitute 15 credits of other 400 or 500-level coursework for the student-teaching semester; those courses are selected in consultation with their advisors, in order to address the students' specific career aspirations.

124 credits are required for the B.S. degree and 30 credits for the M.Ed. degree. The following courses may be double-counted toward both the B.S. and the M.Ed. degrees, up to a limit of 12 credits: EDTHP 500-level courses (3), SCIED 411(3) & SCIED 412(3), and SCIED 500-level courses. Note that at least 50% of credits proposed for double-counting must be at the 500 level.

There are a number of other requirements for Pennsylvania teacher certification, including state-required tests and clearances, as well as coursework that can be completed at either the undergraduate or graduate level. Some courses, not enumerated above, that are usually required to satisfy teacher certification requirements include C I 280(3), SPED 400(3), and C I 495C(3). Please note that changes in Pennsylvania certification requirements are common; students should check the Certification FAQ page at the Penn State Science Education website for updates and clarification about the specific requirements that affect them, based on their admission date to the IUG program option. Note also that students in the IUG program option are not required to complete all Penn State teacher certification requirements in order to receive their B.S. and M.Ed. degrees, as long as they have completed the requirements for those degrees, as described in the undergraduate and graduate *Bulletins*. For example, a student who has completed all degree requirements but has not yet received a score for the Pennsylvania-required Biology PRAXIS exam may be awarded both of his or her earned degrees.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-132

Review Date: 8/23/16

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

SC

Biotechnology

University Park, Eberly College of Science (BIOTC)

Director of Curricular Affairs, Meredith Defelice, *in charge*

Biotechnology may be broadly defined as the application of principles of molecular and cell science in the production of biologically important or industrially useful products. Therefore, students in the Biotechnology major will (1) acquire a strong foundation in the life and chemical sciences, (2) learn how fundamental science is applied to problems through biotechnology, (3) develop basic laboratory skills, perform standard techniques, work with state-of-the-art instrumentation, describe and evaluate analytical methodology used in biotechnology, and (4) become familiar with societal concerns and governmental regulations regarding the biotechnology industry. One very important strength of this major is the extensive laboratory experience each student receives. In the General option, students are very strongly encouraged to consider Cooperative Education with industry as an integral part of their curriculum. In addition to the General option in Biotechnology, the major also offers the Clinical Laboratory Science option.

In order to be eligible for entrance to the Biotechnology major, a student must have: (1) attained at least a 2.00 cumulative grade-point average, and (2) completed CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), and MATH 140 GQ(4) and earned a grade of C or better in each of these courses.

For the B.S. degree in Biotechnology, a minimum of 125 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 95 credits^[87]
(This includes 15 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR MAJOR (ALL OPTIONS): 47 credits

PRESCRIBED COURSES (47 credits)
CHEM 110 GN(3)^[11], CHEM 111 GN(1)^[11], CHEM 112 GN(3)^[11], CHEM 113 GN(1), MATH 140 GQ(4)^[11], MATH 141 GQ(4), MICRB 201(3)^[85], MICRB 202(2), PSU 016(1) (Sem: 1-2)
PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 1-4)
BMB 211, BMB 221, BMB 251(3)^[85], BMB 252(3)^[85], MICRB 410(3), MICRB 421(3) (Sem: 3-4)
MICRB 421(3) (Sem: 5-6)

REQUIREMENTS FOR THE OPTION: 48 credits

GENERAL BIOTECHNOLOGY OPTION: (48 credits)

PRESCRIBED COURSES (20 credits)
BIOL 322(3) (Sem: 3-4)
BMB 442(3) (Sem: 5-6)
BIOTC 416(2), BIOTC 459(3), BIOTC 479(3), BIOTC 489(3), STAT 250 GQ(3) (Sem: 5-8)

ADDITIONAL COURSES (6-8 credits)
CHEM 202(3), CHEM 203(3); or CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (20-22 credits)
Select 14-16 credits from department list C (Sem: 3-8)
Select 6 credits from any 400-level BMB/BIOTC/MICRB lecture course, FDSC 408(2) or department list D (additional 400-level courses) (Sem: 5-8)

CLINICAL LABORATORY SCIENCE OPTION: (48 credits)
This option provides both the academic and clinical preparation for students interested in a career as a clinical laboratory scientist. Positions are found in hospital, physician-office, reference, industrial, and research laboratories. To complete baccalaureate degree requirements, students enter a ten-month clinical practicum (MICRB 405A-F) at an affiliate hospital for the senior year. (Current affiliations are with Mount Nittany Medical Center, State College and Pennsylvania Hospital, Philadelphia.) Students are recommended for a fixed number of hospital positions on a competitive basis. Cumulative grade-point average and hospital school admission requirements serve as criteria for recommendation. The B.S. degree is awarded at the first commencement following completion of the clinical practicum.

PRESCRIBED COURSES (36 credits)
BMB 212(1), MICRB 412(3), MICRB 422(2) (Sem: 5-6)
MICRB 405A(8), MICRB 405B(1), MICRB 405C(6), MICRB 405D(5), MICRB 405E(7), MICRB 405F(3) (Sem: 7-8)

ADDITIONAL COURSES (9-11 credits)
BIOL 322(3) or BIOL 222(3) (Sem: 3-4)
CHEM 202(3), CHEM 203(3); or CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (1-3 credits)
Select 1-3 credits from department list (Sem: 3-8)

Integrated B.S. in Biotechnology - Master of Biotechnology in Biotechnology

PROFESSOR Loida Escote-Carlson, *in charge*

The integrated B.S. in Biotechnology-Master of Biotechnology degree program is designed to enable qualified undergraduate students in the B.S. Biotechnology program to graduate in five years with the Master of Biotechnology degree. The requirements of the Master of Biotechnology degree are designed to prepare students for diverse career opportunities in the burgeoning biotechnology industry. The integrated B.S. Biotechnology-Master of Biotechnology program will enhance the preparation and qualifications of B.S. Biotechnology students seeking entry-level positions in biotechnology and related industries. At the same time, students develop a practical knowledge of the laboratory techniques that underlie current research in the life sciences that will serve as excellent preparation for those students in the Master of Biotechnology program who later decide to pursue further graduate degrees.

A maximum of 12 credits will be cross-counted towards the B.S. and Masters degrees, from the following courses:
BMB 400(2-3), BIOTC 479(3), MCIBS 571(2), MCIBS 591(1), and IBIOS 593(3).

B.S. Biotechnology Requirements:
Total credits required: 125
GENERAL EDUCATION: 46 credits (15 of these are included in the REQUIREMENTS FOR THE MAJOR)
REQUIREMENTS FOR THE MAJOR: 94-95 credits

Prescribed courses: 67 credits

Additional courses: 6-9 credits
Supporting courses and related areas: 18-21 credits

Master of Biotechnology Requirements:

Total credits required: 30 (18 of which must be from 500-level courses)

Required courses: 16-19 credits
Electives: 11-14 credits

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[85] To graduate with a B.S. degree in Biotechnology, a grade of C or better is required in two of the following courses: MICRB 201, B M B/MICRB 251, B M B/MICRB 252.

[87] To graduate with a B.S. degree in Biotechnology, a grade of C or better is required in 9 credits of any BIOTC, B M B, or MICRB 400-level course except B M B 442, B M B 443W, B M B 445W, B M B 448, B M B 488, B M B 496, MICRB 421W, MICRB 422, MICRB 447.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-133

Review Date: 08/23/16

UCA Revision #1: 8/3/06

SC

"It is an elective course covering Scientific Visualization and they plan on offering it again and tie it with data science (data visualization) which is an emerging area in Computing. By keeping this course they would not need to develop and approve a new course proposal."

BioRenewable Systems

University Park, College of Agricultural Sciences (BRS)

PROFESSOR NICOLE BROWN, Program Coordinator

The BioRenewable Systems Major is an applied major that intertwines the study of engineering technology, natural resources, and agriculture with fundamentals of business, entrepreneurship, and management. Administered through the Department of Agricultural and Biological Engineering, the BioRenewable Systems (BRS) program uniquely prepares students to solve 21st century problems and attain careers in both traditional sectors and those relating to the emerging bioeconomy. Students in this program will secure: (1) knowledge of fundamental sciences related to resources, processes, and products in biorenewable systems; (2) communication and managerial skills relevant to careers in product development, technology, sales, marketing and management; and (3) the ability to apply systems analysis skills, positioning them for effective problem solving and leadership in the agricultural and bioproducts industries.

Graduates are typically employed as sales and field representatives, financial and technical consultants, and technical service or quality assurance personnel in renewable bioproducts or related agricultural sectors such as: power and machinery systems, forest products, food production, bioprocessing, environmental systems, wood structures, bioenergy, co-product development, and agrochemicals. Graduates may continue their education in a graduate program with a science, engineering, or business orientation.

The BRS major has two options: Agricultural Systems Management (ASM) and BioProducts (BP).

Agricultural Systems Management Option

This option applies a technological approach to understanding and managing agricultural production systems to meet economical and sustainable needs. Basic study is emphasized in the agricultural and business management sciences, along with the application of the technical results of engineering research, design, and manufacturing. Graduates of this option apply their technology and management training to the diverse areas of food and fiber production; bioprocessing; and land, water, and air resources.

BioProducts Option

The scientific nature of biobased resources—their unique design, sustainability, and renewability—constitutes the core of this option. Building upon that foundation, students will learn techniques for converting and efficiently utilizing these materials to maximize product life cycles, while simultaneously exploring relevant marketing and management strategies. Technical electives for this option emphasize material sciences, engineering, and/or business. Career tracks are broad, ranging from traditional forest products companies to emerging sectors, including bioenergy co-products.

For the B.S. degree in BioRenewable Systems, a minimum of 120 credits is required for the BioProducts Option and minimum of 121 credits is required for the Agricultural Systems Management Option.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(30 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 105-109 credits

(This includes 30 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GS courses; 9 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 73-75 credits

PRESCRIBED COURSES (45 credits)

ACCTG 211(4), CHEM 110 GN(3), CHEM 111 GN(1), EDSGN 100(3) [1], ENGL 015 GWS(3) (Sem: 1-2)
AGBM 106(3) [1], BRS 221(3) [1], BRS 300(3) [1], BRS 391 GWS(2), BRS 437(4) [1] (Sem: 5-6)
BRS 392 GWS(2), BRS 393(1), BRS 422(3), BRS 426(3), BRS 428(3), BRS 429W(3), BRS 490(1) (Sem: 7-8)

ADDITIONAL COURSES (28-30 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
EBF 200 GS(3) or ECON 104 GS(3) (Sem: 1-2)
MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)
PHYS 211 GN(4) or PHYS 250 GN(4) (Sem: 1-2)
AGBM 101 GS(3) or ECON 102 GS(3) (Sem: 3-4)
BIOL 110 GN(4) or BIOL 011 GN(3) and BIOL 012 GN(1) (Sem: 3-4)
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
STAT 200 GQ(4) or STAT 240 GQ(3) (Sem: 3-4)
BA 241(2) and BA 242(2); or BA 243(4) or BLAW 243(3) (Sem: 3-4)

REQUIREMENTS FOR THE OPTIONS: 32-34 credits

AGRICULTURAL SYSTEMS MANAGEMENT OPTION: 33-34 credits

PRESCRIBED COURSES (9 credits)

SOILS 101 GN(3) (Sem: 3-4)
ASM 310(3) [1], ASM 327(3) [1] (Sem: 5-6)

ADDITIONAL COURSES (6-7 credits)

AGRO 028(3) or HORT 101 GN(3) (Sem: 3-4)
ANSC 100 GN(3); ANSC 201(4); ANSC 207/FDSC 207(2), ANSC 208/FDSC 208(1) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 18 credits of specialization courses in consultation with an advisor. At least 12 credits must be at 200-400 level. (Sem: 5-8)

BIOPRODUCTS OPTION: 32 credits

PRESCRIBED COURSES (14 credits)

BRS 411(4), BRS 417(4) (Sem: 5-6)
BRS 402(3) [1], BRS 423(3), (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 3 credits in leadership/entrepreneurship. (Sem: 5-6)
Select 15 credits of specialization courses in consultation with an advisor. At least 9 credits must be at 200-400 level. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-001

Review Date: 04/5/2016

Business

Abington College (BSBAB)

Altoona College (BSBAL)

Berks College (BSBBL)

University College (BSBCC): Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York
University College (BSBIC) via the World Campus

The Bachelor of Science in Business (B.S.B.) is a professionally oriented business degree program that combines the theoretical underpinnings of core business disciplines, notably management, marketing, finance, and supply chain management, with applied study in a practical setting. Through the choice of an 18-credit option, students specialize in a key business sector. Students also develop written and oral communication skills throughout the program, acquire contemporary technology skills, and engage in active and collaborative learning. The degree allows students to become familiar with the unique business environments of their local communities, a design that sets the degree apart from other business degrees offered within the University and throughout the Commonwealth.

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

ACCOUNTING OPTION: This option prepares students to pursue careers in business with an emphasis on the areas of financial and managerial accounting, systems and controls, auditing, and taxation.

ENTREPRENEURSHIP OPTION: This option prepares students to pursue entrepreneurial careers with emphasis on idea generation, opportunity analysis, new product creation, and business plan development.

FINANCIAL SERVICES OPTION: This option prepares students to pursue careers in financial organizations with emphasis on wealth management, tax planning, risk management, and financial analysis.

HEALTH SERVICES OPTION: This option prepares students to pursue careers in the health services sector with emphasis on the financial and administrative aspects of health care enterprises.

INDIVIDUALIZED BUSINESS OPTION: This option provides the opportunity for students to pursue an approved business-focused interdisciplinary program of study.

MANAGEMENT AND MARKETING OPTION: This option prepares students to pursue careers in business organizations with an emphasis on the skills and knowledge necessary for the business professional to function in community and regional centers of commerce.

Entrance Requirement: Completion of MATH 022 or MATH 040, 041, 110, 140.

For the B.S. degree in Business, a minimum of 120 credits is required, 15 of which must be at the 400 level.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 10 credits

REQUIREMENTS FOR THE MAJOR: 77 credits

(This includes 12 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 59 credits

PRESCRIBED COURSES (41 credits)

ECON 102 GS(3) (Sem: 1-4)

ACCTG 211(4), ECON 104 GS(3), MIS 204(3) (Sem: 3-4)

BA 321(3) [\[1\]](#), BA 322(3) [\[1\]](#), BA 420(1) [\[1\]](#), FIN 301(3) [\[1\]](#), MGMT 301(3) [\[1\]](#), MKTG 301(3) [\[1\]](#), SCM 301(3) [\[1\]](#) (Sem: 5-6)

IB 303 IL(3) [\[1\]](#) (Sem: 5-8)

BA 421(3) [\[1\]](#), BA 422(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (15-18 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-4)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-4)

BA 243(4) or BA 241(2) and BA 242(2) (Sem: 3-4)

Select 3 or 6 credits from BA 495A(3 or 6) [\[1\]](#), BA 495B(3 or 6) [\[1\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (0-3 credits)

Select 0-3 credits from 400-level business courses from: ACCTG, BA, ECON, ENTR, FIN, FINSV, HPA, IB, MGMT, MIS, MKTG, RM, or SCM [\[1\]](#) (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 18 credits [\[1\]](#)

ACCOUNTING OPTION: (18 credits)

PRESCRIBED COURSES (9 credits)

ACCTG 404(3), ACCTG 471(3), ACCTG 472(3) (Sem: 5-6)

ADDITIONAL COURSES (6 credits)

ACCTG 403(3) or 403W(3) (Sem: 7-8)

ACCTG 405(3) or FINSV 411(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits of 400-level courses from: ACCTG, BA, ECON, ENTR, FIN, FINSV, HPA, IB, MGMT, MIS, MKTG, RM, or SCM (Sem: 7-8)

ENTREPRENEURSHIP OPTION: (18 credits)

PRESCRIBED COURSES (9 credits)

ENTR 300(3), ENTR 320(3) (Sem: 5-6)

ENTR 400(3) (Sem: 7-8)

ADDITIONAL COURSES (0-3 credits)

Select 0-3 credits in CAS 352(3) or ENGL 419(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (6-9 credits)

Select 6 to 9 credits of 400-level ENTR courses in consultation with your advisor (Sem: 5-8)

FINANCIAL SERVICES OPTION: (18 credits)

PRESCRIBED COURSES (3 credits)

FIN 420(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)

Select 3 credits from ACCTG 405 or FINSV 411 (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits in 300 or 400-level (with at least 3 credits at the 400-level) from ACCTG, FIN, FINSV or RM (Sem: 5-8)

HEALTH SERVICES OPTION: (18 credits)

(Minimum 6 credits at the 400-level)

PRESCRIBED COURSES (6 credits)

HPA 101(3) (Sem: 5-6)

HPA 332(3) (Sem: 5-8)

ADDITIONAL COURSES (0-3 credits)

Select 0-3 credits from BBH 302(3), CAS 352(3), CAS 404(3), ENGL 416(3), ENGL 419(3), LER 424(3), LER 472(3), PSYCH 281 GS(3), PSYCH 484(3), or PSYCH 485(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9-12 credits)

Select 3-9 credits from 300 or 400-level HPA courses (Sem: 5-8)

Select 0-6 credits of 300-400-level courses from ACCTG, BA, ECON, ENTR, FIN, FINSV, HPA, IB, MGMT, MKTG, MIS, RM or SCM (Sem: 6-8)

INDIVIDUALIZED BUSINESS OPTION: (18 credits)

Select 18 credits of study (with at least 3 credits at the 400-level) as submitted by the student and approved by the campus BSB Program Coordinator (Sem: 5-8)

MANAGEMENT AND MARKETING OPTION: (18 credits)

ADDITIONAL COURSES (0-6 credits)

Select 0-6 credits from the following: BA 250(3), ENGL 419(3), MKTG 220(3) or one of the following, CAS 250(3), CAS 252(3), CAS 352(3), CAS 404(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12-18 credits)

A minimum of 3 credits of supporting courses must be selected at the 400-level.

Select 3 credits from 300 or 400-level MGMT courses (Sem: 5-8)

Select 3 credits from 300 or 400-level MKTG courses (Sem: 5-8)

Select 6-12 additional credits in 300 or 400-level courses from MGMT or MKTG courses (Sem: 6-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

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Blue Sheet Item #: 42-04-065

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UCA Revision #1: 8/3/06

[Comments](#)

Civil Engineering

University Park, College of Engineering (C E)

PROFESSOR PATRICK J. FOX, *Head, Department of Civil and Environmental Engineering*

The program in Civil and Environmental Engineering is designed to provide the basic undergraduate education required for private practice and public service in civil engineering, and/or continue formal education. Emphasis is placed on the fundamentals of civil engineering principles and design techniques. Students utilize basic engineering science concepts in several of the different specialty areas (e.g., construction/management, environmental, materials/pavement design/geotechnical, structures, transportation, and water resources). Finally the students are able to choose an area of specialization for professional practice or graduate studies.

Program Educational Objectives:

The educational objectives of our undergraduate program will prepare our graduates to:

- begin and sustain a career in consulting, industry, or state and federal government agencies, such as the departments of transportation and departments of environmental protection;
- lead and work in interdisciplinary teams needed to design sustainable and resilient infrastructure through knowledge and application of environmental, geotechnical, materials, structural, transportation, and water resources engineering;
- engage in life-long learning opportunities, including graduate school; and
- obtain and maintain professional licensure

Program Outcomes (Student Outcomes):

The undergraduate program will provide students with:

- a. an ability to apply knowledge of mathematics, science, and engineering;
- b. an ability to design and conduct experiments, as well as to analyze and interpret data;
- c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
- d. an ability to function on multidisciplinary teams;
- e. an ability to identify, formulate, and solve engineering problems;
- f. an understanding of professional and ethical responsibility;
- g. an ability to communicate effectively;
- h. an understanding of the impact of engineering solutions in a global, economic, environmental, and societal context;
- i. a recognition of the need for, and an ability to engage in, life-long learning;
- j. knowledge of contemporary issues in civil engineering;
- k. an ability to use modern engineering techniques, skills, and tools necessary for engineering practice.

The program is broadened by courses in communication, arts, humanities, social and behavioral sciences, as well as other engineering disciplines. Students gain experience in working as members of a team and using interdisciplinary approaches to solve problems. These experiences, as well as those related to engineering principles and design, are provided through exercises in the classroom, laboratory, and field. The program culmination is a capstone design course wherein the students' knowledge and skills are applied to actual engineering problems.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Civil Engineering, a minimum of 127 credits is required. The baccalaureate program in Civil Engineering at University Park is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 112 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (71 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), EMCH 211(3) [\[1\]](#), EDSCN 100(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#) (Sem: 1-2)
EMCH 212(3) [\[1\]](#), EMCH 213(3) [\[1\]](#), STAT 401(3), GEOSC 001(3), MATH 220 GQ(2), MATH 251(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#) (Sem: 3-4)
CE 310(3) [\[1\]](#), CE 321(3) [\[1\]](#), CE 332(3) [\[1\]](#), CE 335(3) [\[1\]](#), CE 336(3) [\[1\]](#), CE 340(3) [\[1\]](#), CE 360(3) [\[1\]](#), CE 370(3) [\[1\]](#), ENGL 202C GWS(3) (Sem: 5-6)

ADDITIONAL COURSES (29-32 credits)

CE 100S(1) or 1 credit of First-Year Seminar or elective (Sem: 1-2)

ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)

CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)

CMPSC 200 GQ(3) or CMPSC 201 GQ(3) (Sem: 3-4)

ECON 102 GS(3), ECON 104 GS(3), or ECON 014 GS(3) (Sem: 3-4)

ME 201(3) or CHE 220(3) [\[30\]](#) (Sem: 5-6)

CE 337(1) or CE 475(4) (Sem: 5-6) [\[+\]](#)

Select 9 credits from CE 341(3), CE 342(3), CE 371(3), CE 422(3), CE 423(3), CE 432(3), CE 435(3), CE 436(3), CE 437(3), CE 441(3), CE 447(3), CE 461(3), CE 462(3), CE 475(4), CE 476(3), CE 479(3) (Sem: 5-6) [\[+\]](#)

Select 3 credits of CE 400 level "W" courses (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS: (9 credits)

Select 9 credits of technical elective from C E 300-level courses, CE 400-level courses, or department list. (Sem: 7-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[\[30\]](#) Students may substitute 6 credits of ROTC for 3 credits of GHA courses and 3 credits of M E.

[\[+\]](#) If C E 475 is taken, one credit goes toward lab requirement and remaining three go towards C E or general technical electives.

[\[#\]](#) Two of those courses must be selected from at least 2 of the 3 remaining technical areas in the Civil Engineering program-- structures (x40), hydrosystems (x60), and environmental (x70).

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-03-040

Review Date: 11/17/15

R & T: Approved 5/24/2013

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

EN

Classics and Ancient Mediterranean Studies

University Park, College of the Liberal Arts (CAMS)

PROFESSOR Mark Munn, Head, Department of Classics and Ancient Mediterranean Studies

Classics and Ancient Mediterranean Studies is concerned with the civilizations of the ancient Mediterranean world, including the ancient Greeks, Romans, and the peoples of Egypt and the Near East. The study of these civilizations includes their languages and literatures, history and politics, religion and mythologies, philosophies, and material culture. Students electing the CAMS major follow one of three options. The Ancient Languages Option requires study of Greek or Latin, one or more of the languages of the ancient Near East, or a combination of languages, and is recommended especially for students planning to pursue any classical, Near Eastern, or Egyptian subject in graduate school; planning rabbinic or seminary study; or preparing to teach Latin or Greek at the secondary level. Students in the Language Option are urged to schedule at least one course in historical linguistics or comparative grammar. The Ancient Mediterranean Archaeology (AMA) Option is designed for students interested in the physical evidence for ancient Mediterranean cultures, including the rise and development of settlements and cities; ceramics, metals, stone, and organic remains; and population changes over time. The Classics and Ancient Mediterranean Studies (CAMS) Option is suitable for students interested in a broadly interdisciplinary study of the cultures of the ancient Mediterranean and does not require study of language, although students are encouraged to study the appropriate ancient languages. All students in the major are particularly encouraged to participate in one of the Penn State Education Abroad Programs and/or archaeological field schools in the Mediterranean area. Approved archaeological fieldwork is required for the AMA Option. Up to 15 credits of appropriate education abroad courses may be applied to requirements for the major.

For the B.A. degree in Classics and Ancient Mediterranean Studies, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selections, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 20-24 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 30-34 credits^[1]

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 18 credits

No more than 15 credits in courses numbered 099, 199, 299, 399, or 499 may count toward the requirements for the major.

PRESCRIBED COURSES (6 credits)

CAMS 005 GH;IL(3) (Sem: 1-6)

CAMS 400(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits in Greek or Roman literature and language, civilization, or archaeology from approved department list (Sem: 1-8)

Select 3 credits in Near Eastern literature and language, civilization, or archaeology from approved department list (Sem: 1-8)

Select 6 credits, at or above the 100 level, from appropriate offerings in ancient Near Eastern languages and literatures, ancient history, anthropology, art history, classics and ancient Mediterranean studies, Greek, Hebrew, Jewish studies, Latin, linguistics, philosophy, or religious studies from approved department list (Sem: 1-8)

REQUIREMENTS FOR THE OPTION: 12-16 credits

ANCIENT MEDITERRANEAN ARCHAEOLOGY OPTION: (15-16 credits)

Students in this option must complete one season of approved archaeological fieldwork at an ancient Mediterranean or related site. Up to 6 credits of fieldwork may be applied to the COMMON REQUIREMENTS FOR THE MAJOR.

ADDITIONAL COURSES (3 credits)

CAMS 440(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12-13 credits)

Select 6 credits from the following courses: CAMS 492(3), CAMS 493(3), or other 400-level fieldwork course in an approved archaeological project in the Mediterranean region or Near East in consultation with major adviser. (Sem: 5-8)

Select 3 credits from the following course list:

CAMS 90 GH;IL(3) or JST 90 GH;IL(3) or RLST 90 GH;IL(3); CAMS 104 GH(3) or HIST 104 GH(3) or RLST 104 GH;US;IL(3); CAMS 140 GH;IL(3), or CAMS 150 GH;IL(3) (Sem: 3-6)

Select 3-4 credits from the following course list:

ANTH 410(4), ANTH 420(3) or JST 420(3); ANTH 426W(3) or ANTH 428(3) (Sem: 5-8)

ANCIENT LANGUAGES OPTION: (12 credits)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

At least 6 credits must be in one language.

Select 12 credits at the 400 level in either Greek or Latin or in Akkadian, Aramaic, Biblical Hebrew, Egyptian, Hittite, Sumerian, or other ancient Near Eastern language in consultation with major adviser. (Sem: 1-8)

CLASSICAL AND ANCIENT MEDITERRANEAN STUDIES OPTION: (12 credits)

SUPPORTING COURSES AND RELATED AREAS: 12 credits

Select 6 credits at the 400 level from Classics and Ancient Mediterranean Studies (CAMS), ancient Near Eastern languages, Greek, or Latin courses (Sem: 5-8)

Select 6 credits at the 400 level from appropriate courses in ancient Near Eastern languages and literature, ancient history, anthropology, Classics and Ancient Mediterranean Studies, Jewish studies, linguistics, philosophy, or religious studies from approved department list (Sem: 5-8)

Integrated B.S. in Archaeological Science and B.A. in Classics and Ancient Mediterranean Studies/M.A. in Anthropology Degree Requirements

The Department of Anthropology offers an integrated B.A./B.S./M.A. (IUG) program designed to allow academically superior students to obtain a B.A. or B.S. degree in Anthropology, a B.A. degree in Classics and Ancient Mediterranean Studies (CAMS), and a M.A. degree in Anthropology in five years of study. To complete the program in five years, students interested in the Integrated Undergraduate and Graduate degree in Anthropology must apply for admission to

the Graduate School and the Integrated B.S./M.S. Program by the end of their junior year.

During the first three years, the student will follow course scheduling for the B.A. degree in CAMS and either the B.A. degree in Anthropology or the B.S. degree in Archaeological Science (see the Undergraduate *Bulletin*). Students who intend to enter the IUG program are encouraged to take upper level classes during their first three years whenever appropriate. By the end of the junior year, students normally apply for admission to both the IUG program and to the Graduate School. Acceptance decisions will be made prior to the beginning of the senior year and M.A. advisors will be appointed for successful applicants. During the senior year, IUG students follow the scheduling of the selected options for their B.A. or B.S. majors, with an emphasis on completing 500-level course work as appropriate. During the senior year, IUG students will start work on their thesis research to meet the M.A. thesis requirements. During the fifth year, IUG students take courses fulfilling the M.A. degree requirements and complete their M.A. thesis.

Admission Requirements

Students who wish to complete the Integrated Undergraduate and Graduate Program in Anthropology should apply for admission to both the Graduate School and the IUG Anthropology Program no later than the end of their junior year. Successful students will be admitted formally into the graduate program in Anthropology just prior to their senior year, if their progress has been satisfactory. Admission prior to the senior year is also possible in some unusual circumstances. In all cases, admission to the program will be at the discretion of the joint Anthropology-CAMS admission committee. Criteria for admission include a minimum overall GPA of 3.4 in their majors, strong recommendation letters from faculty, and an excellent proposal for a research project with a specific adviser who has agreed to guide the student through to the completion of the M.A. thesis.

Graduate Coursework

REQUIRED COURSES

ANTHROPOLOGY (ANTH)

493. Field Techniques (3)
521. Current Literature in Archaeology (2)
545. Seminar in Anthropology (6)
588. Method and Theory in Archaeology (3)
600. Thesis Research (6)

ADDITIONAL COURSES

Four required credits in ANTH 494(1-12) or CAMS 494(1-12)
Six required credits in CAMS 592(3), 593(3-6), or 596(1-9)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-098

Review Date: 08/20/13

LA

Communication Arts and Sciences

Berks College (CASBL)

University College (CASC): Penn State Brandywine, Penn State York

University Park, College of the Liberal Arts (CAS)

Contacts: Berks College, Catherine Catanach, cdc18@psu.edu; Penn State Brandywine, Wayne McMullen, wjm11@psu.edu; Penn State York, Deborah Eicher-Catt, dele4@psu.edu; College of the Liberal Arts, Dr. Rachel A. Smith, ras57@psu.edu

This major provides increased understanding and practice in the ways humans use symbols to influence people and the world around them. The ability to communicate effectively with others in personal, social, work and multicultural situations is essential in modern society. A student of Communication Arts and Sciences will learn to think critically, analyze and solve problems, understand and manage conflict, argue persuasively, influence people, form and keep relationships, give effective presentations, and participate in the civic and political life of a community. The flexibility of the program offers preparation for a variety of careers such as administration, law, business, health, and human services fields. A CAS degree also lends itself well to a concurrent degree program in which students prepare themselves in several fields of study.

For the B.A. degree in Communication Arts and Sciences, a minimum of 124 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 25 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in front of *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 30 credits^[1]

PRESCRIBED COURSES (9 credits)

CAS 301 GH(3), CAS 303 GS(3), CAS 204(3) (Sem: 3-6)

ADDITIONAL COURSES (6 credits)

Select 3 credits of skills courses from CAS 203 GS(3), CAS 213(3), CAS 214(3), CAS 215(3), CAS 216(2), CAS 250(3), CAS 252(3), CAS 271 US;IL(3), CAS 280W(3), or CAS 283(3) (Sem: 3-8)

Select 3 credits of 300-level courses from CAS 302(2), CAS 311(3), CAS 321(3), CAS 352(3), CAS 373(3), CAS 375(3), CAS 383(3), CAS 398(1-9), CAS 399 IL(1-12) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits of other CAS courses; at least 12 credits must be at the 400 level. A maximum of 6 credits from CAS 494, 495, 496, and 499(IL) may satisfy this requirement. CAS 126(3) and CAS 195(1) may not be counted as part of the major (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2010

Blue Sheet Item #: 38-06-118

Review Date: 04/13/2010

LA

Communication Arts and Sciences

University Park, College of the Liberal Arts (CASBS)

This major provides increased understanding and practice in the ways humans use symbols to influence people and the world around them. The ability to communicate effectively with others in personal, social, work and multicultural situations is essential in modern society. A student of Communication Arts and Sciences will learn to think critically, analyze and solve problems, understand and manage conflict, argue persuasively, influence people, form and keep relationships, give effective presentations, and participate in the civic and political life of a community. The flexibility of the program offers preparation for a variety of careers such as administration, law, business, health, and human services fields. A CAS degree also lends itself well to a concurrent degree program in which students prepare themselves in several fields of study.

For the B.S. in Communication Arts and Sciences a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education course selection)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 25 credits

REQUIREMENTS FOR THE MAJOR: 54 credits

PRESCRIBED COURSES (9 credits) [1]

CAS 301 GH(3), CAS 303 GS(3), CAS 204(3)

ADDITIONAL COURSES (6 credits) [1]

Select 3 credits of CAS courses at the 200 level, in addition to the required courses.

Select 3 credits of CAS courses at the 300 level.

SUPPORTING COURSES (39 credits) [1]

Select 15 credits of other CAS courses; at least 12 credits must be at the 400 level. A maximum of 6 credits from CAS 494, 495, 496, and 499(IL) may satisfy this requirement. CAS 126(3) and CAS 195(1) may not be counted as part of the major.

Select 12 credits in quantification from department list. Substitutions may be made with the written permission of the faculty adviser.

Select 12 credits in related disciplines from departmental list of approved courses. Substitutions may be made with the written permission of the faculty adviser.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring 2016

Blue Sheet Item #: 44-06-043

Review Date: 4/5/2016

Corporate Communication

Abington College (CCBA)

University College: Penn State Fayette, Penn State Hazleton, Penn State Lehigh Valley, Penn State Schuylkill, Penn State Wilkes-Barre, Penn State Worthington Scranton (CCCC)

PROFESSOR Roy Robson, Head, Division of Arts and Humanities

The Penn State Corporate Communication Bachelor of Arts (CCBA) program prepares students for various strategic communication roles inside and outside organizations. Graduates of the program hold titles such as public relations professional, social media strategist, speech and copywriter, political aide, marketing communication manager, organizational learning and development specialist, corporate recruiter, and event planner. Graduates have earned advanced degrees in areas such as Business, Law, and Corporate Communication.

The CCBA program is interdisciplinary. While providing depth of study in Corporate Communication, it also includes mandatory Business courses and courses focusing on web based competencies such as writing for the web and digital design. With its overall emphasis on the human and design aspects of contemporary organizations, the program is particularly well-suited to individuals seeking to develop and apply their analytical, verbal, and creative talents. Such talents foster aptitudes in strategic counseling and integrative praxis that, in part, make a Corporate Communication degree unique and highly sought after in the marketplace.

For the B. A. degree in Corporate Communication, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(3-9 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION courses)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 5-9 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 51-52 credits^[1]

(This includes 3-9 credits of General Education courses; 3-6 credits of GS courses; 0-3 credits of GH courses.)

PRESCRIBED COURSES (27 credits)

CAS 204(3), CC 200(3), COMM 100 GS(3) (Sem: 1-4)

MGMT 301(3) (Sem: 3-4)

MKTG 301(3) (Sem: 3-4)

CC 401(3), CC 402(3), CC 490W(3), CC 495A(3) (Sem: 7-8)

ADDITIONAL COURSES (24-25 credits)

Select 3 credits from: ECON 102 GS(3); ECON 104 GS(3) (Sem: 1-4)

Select 3-4 credits from: B A 243(4); PHIL 103 GH(3); PHIL 106 GH(3); PHIL 123 GH(3) (Sem: 1-4)

Select 3 credits from: ART 201(3); COMM 241(3); IST 110 GS(3) (Sem: 1-4)

Select 3 credits from: CAS 250(3); CAS 252(3); CAS 352(3); ENGL 211(3) (Sem: 3-7)

Select 3 credits from: CC 406(3); ENGL 420(3); ENGL 480(3) (Sem: 5-8)

Select 6 credits from: CAS 403(3); CAS 404(3); CAS 455/WMNST 455 US(3); CAS 471 US;IL(3); MGMT 433(3); MKTG 310(3) (Sem: 5-8)

Select 3 credits from: CC 404(3); CC 405(3); COMM 472(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-000A

Review Date: 04/5/2016

Publications update of division head: 09/15/06

UCA Revision #1: 8/3/06

AB

Civil Engineering

Capital College (CE CA)

PROFESSOR SEROJ MACKERTICH, *Program Chair*

The program in Civil and Environmental Engineering is designed to provide the basic undergraduate education required for private practice and public service in civil engineering, and/or continue formal education. Emphasis is placed on the fundamentals of civil engineering principles and design techniques. Students utilize basic engineering science concepts in several of the different specialty areas (e.g., construction/management, environmental, materials/pavement design/geotechnical, structures, transportation, and water resources). Finally the students are able to choose an area of specialization for professional practice or graduate studies.

The objective of the Civil Engineering program is to prepare students for a wide range of career paths that use civil engineering principles and methodologies. A curriculum is provided that prepares our recent graduates to:

- begin and sustain a career in consulting, industry, or state and federal government agencies, such as the departments of transportation and departments of environmental protection;
- lead and work in interdisciplinary teams needed to design sustainable and resilient infrastructure through knowledge and application of environmental, geotechnical, materials, structural, transportation, and water resources engineering;
- engage in life-long learning opportunities, including graduate school; and
- obtain and maintain professional licensure

Program Outcomes (Student Outcomes):

The undergraduate program will provide students with:

- a. an ability to apply knowledge of mathematics, science, and engineering;
- b. an ability to design and conduct experiments, as well as to analyze and interpret data;
- c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
- d. an ability to function on multidisciplinary teams;
- e. an ability to identify, formulate, and solve engineering problems;
- f. an understanding of professional and ethical responsibility;
- g. an ability to communicate effectively;
- h. an understanding of the impact of engineering solutions in a global, economic, environmental, and societal context;
- i. a recognition of the need for, and an ability to engage in, life-long learning;
- j. knowledge of contemporary issues in civil engineering;
- k. an ability to use modern engineering techniques, skills, and tools necessary for engineering practice.

The program is broadened by courses in communication, arts, humanities, social and behavioral sciences, as well as other engineering disciplines. Students gain experience in working as members of a team and using interdisciplinary approaches to solve problems. These experiences, as well as those related to engineering principles and design, are provided through exercises in the classroom, laboratory, and field. The program culmination is a capstone design course wherein the students' knowledge and skills are applied to actual engineering problems.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ) and PHYS 211 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Civil Engineering, a minimum of 127 credits is required. The baccalaureate program in Civil Engineering at Harrisburg is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 112 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (71 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), EMCH 211(3) [\[1\]](#), EDSGN 100(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#) (Sem: 1-2)
EMCH 212(3) [\[1\]](#), EMCH 213(3) [\[1\]](#), STAT 401(3), GEOSC 001(3), MATH 220 GQ(2), MATH 251(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#) (Sem: 3-4)
CE 310(3) [\[1\]](#), CE 321(3) [\[1\]](#), CE 332(3) [\[1\]](#), CE 335(3) [\[1\]](#), CE 336(3) [\[1\]](#), CE 340(3) [\[1\]](#), CE 360(3) [\[1\]](#), CE 370(3) [\[1\]](#), ENGL 202C GWS(3) (Sem: 5-6)

ADDITIONAL COURSES (29-32 credits)

CE 100(1) or 1 credit of First-Year Seminar or elective (Sem: 1-2)

ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)

CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)

CMPSC 200 GQ(3) or CMPSC 201 GQ(3) (Sem: 3-4)

ECON 102 GS(3), ECON 104 GS(3), or ECON 014 GS(3) (Sem: 3-4)

ME 201(3) or CHE 220(3) [\[30\]](#) (Sem: 5-6)

CE 337(1) or CE 475(4) (Sem: 5-6) [\[+ 1\]](#)

Select 9 credits from CE 341(3), CE 342(3), CE 371(3), CE 422(3), CE 423(3), CE 432(3), CE 435(3), CE 436(3), CE 437(3), CE 441(3), CE 447(3), CE 461(3), CE 462(3), CE 475(4), CE 476(3), CE 479(3) (Sem: 5-~~6~~ [\[7\]](#))

Select 3 credits of CE level "W" courses (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS: (9 credits)

Select 9 credits of technical elective from CE 300-level courses, CE 400-level courses, or department list. (Sem: 7-8)

Integrated B.S. in Civil Engineering/M.Eng. in Environmental Engineering Program

The Civil Engineering undergraduate and Environmental Engineering graduate program offers a limited number of academically superior Bachelor of Science candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Civil Engineering and the Master of Engineering in Environmental Engineering. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to earn the two degrees in five years.

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science and Master of Engineering degrees. However, the total course load is reduced due to the maximum of 10 credits that can count towards both degrees. A minimum of 7 credits proposed to count for both degrees must be

at the 500 level. Master's paper credits may not be double counted. The first three years of the IUG program are identical to the first three years of the Bachelor of Science program. The fourth year of the IUG program differs from that of the Bachelor of Science program due to the courses that count toward the Master of Science degree requirements.

Students will be admitted on a provisional basis late in their 6th semester so that they may be advised appropriately for the IUG 7th semester courses. Formal acceptance is contingent upon maintaining a 3.0 cumulative GPA through the 6th semester, and a collective GPA of 3.3 or better in courses designated MATH, CHEM, CE, or ENVE.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the student has completed 114 to 115 credits, the end of the first semester of the senior year for a typical student in the program. Students who have not maintained a collective 3.3 GPA in courses designated MATH, CHEM, CE, or ENVE will be transferred to a probationary status. Students who have not maintained a collective GPA of 3.3 or better in courses designated MATH, CHEM, CE, or ENVE by end of their eighth semester will be **dropped** from the graduate program but will continue in the Bachelor of Science C E degree program.

If for any reason a student admitted to the IUG program is unable to complete the requirements for the Master of Engineering degree, the student will be permitted to receive the Bachelor of Science degree, assuming all the undergraduate degree requirements have been completed satisfactorily.

Students have the choice of receiving the B.S. degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years. Note that students who are awarded a graduate assistantship must elect to receive the B.S. degree at the end of the fourth year. If for any reason a student admitted to the IUG program is unable to complete the requirements for the Master of Science degree, the student will be permitted to receive the Bachelor of Science degree assuming all the undergraduate degree requirements have been satisfactorily completed. Students who successfully complete the courses listed in the recommended schedule will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

Admission Requirements

To apply, students must be enrolled in the PSH Civil Engineering B.S. program. To initiate the application process, students must submit an *Integrated Undergraduate-Graduate (IUG) Degree in Civil Engineering Application Form*, a transcript, and three faculty recommendations. If the student expresses interest early in their undergraduate career, their faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. In order to apply for the IUG program, students must have completed a minimum of 82 credits. At the time of the application, students must have completed or be enrolled in CE 335, 336, 360, and 370.

A typical student would apply by the sixth semester and before the beginning of the seventh semester. For consideration for acceptance into the program, students must have earned a minimum cumulative grade-point average of 3.0, and a collective GPA of 3.3 or better in courses designated MATH, CHEM, CE, or ENVE.

To apply formally, students must submit a completed Graduate School application. The student should mention in the notes section that the application is for the IUG program in Civil Engineering/Environmental Engineering.

Students will be admitted on a provisional basis late in the spring semester of their application year so that they may be advised appropriately for the IUG 7th semester courses. Formal acceptance is contingent upon maintaining the 3.0 cumulative GPA through the 6th semester, and a collective GPA of 3.3 or better in courses designated MATH, CHEM, CE, or ENVE.

Degree Requirements

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science and Master of Engineering degrees. The total course load is reduced due to a maximum of 10 credits that can count towards both degrees. The minimum of 7 credits double-counted must be at the 500 level. Master's paper credits may not be double counted.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[30] Students may substitute 6 credits of ROTC for 3 credits of 400-level CE courses and 3 credits of ME or EE.

[+] If CE 475 is taken, one credit goes toward lab requirement and remaining three go towards CE or general technical electives.

[#] Those courses must be selected from at least 4 of the 5 technical areas in the Civil Engineering program--transportation (x20), construction (x30), structures (x40), hydrosystems (x60), and environmental (x70).

Last Revised by the Department: Fall 2016

Blue Sheet Item #: 44-01-046

Review Date: 8/25/15

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

EN

Elementary and Early Childhood Education

Penn State Abington
 Penn State Altoona
 Penn State Berks
 Penn State Erie, The Behrend College

University Park, College of Education (CEAED)

PROFESSOR STEPHANIE SERRIERE, *Director*

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

ELEMENTARY & EARLY CHILDHOOD EDUCATION. The Elementary and Early Childhood Education (ECE) major prepares candidates to teach all content areas in Pre-Kindergarten through grade 4 (PK-4). Requirements for successful completion of the major include coursework specific to elementary and early childhood learning environments, child development, and field experiences in grades PK-4 classrooms, as well as content and teaching methods courses specific to teaching language and literacy, mathematics, science, and social studies. Students who successfully complete this major will have met all coursework and field experience requirements for the PK-4 Instructional I Certificate issued by the Pennsylvania Department of Education (PDE). In addition, they will have been prepared for the appropriate PRAXIS exams, which are the standardized assessment required by PDE for this certification.

Students must apply for admission to the major. Students interested in the major should contact their advisor and enroll in a C I 295 field experience, which features participation in the classroom.

Baccalaureate degree candidates must meet the following requirements 1-3 by the end of their third semester:

1. A minimum cumulative grade point average of 3.00.
2. Satisfaction of any basic-skills or entrance testing requirements as specified by the Pennsylvania Department of Education in force at the time of application for entrance to the major.

Requirements 3-8 must be met by the end of the fourth semester when students typically participate in the Entrance to Major process.

3. A grade of "C" or better in all specified courses.
4. Completion of an early field experience specified by the certification program.
5. Completion of a core of Education courses specified by the certification program.
6. Completion of additional credits as specified by the certification program.
7. Completion of at least 48 semester credit hours, including ENGL 015 GWS(3) or ENGL 030 GWS(3), six credits of quantification, and three credits of natural science.
8. Approval from the professional education adviser or the head of the pertinent certification program.

For the B.S. degree in Elementary & Early Childhood Education PK-4, a minimum of 127 credits is required.

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in this bulletin.)

FIRST YEAR SEMINAR:

(Included in GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 109-110 credits [\[1\]](#)

(This includes 27 credits of General Education courses: 6 credits of GH courses, 9 credits of GN courses, 6 credits of GQ courses, 6 credits of GS)

PRESCRIBED COURSES (76 credits)

C I 295A(3), HD FS 229 GS(3) (Sem: 1-3)
 C I 280 GH(3), EDPSY 014(3), EDTHP 115 US(3), MATH 200 GQ(3) (Sem: 1-4)
 A ED 303(3), C I 495A(3), C I 495D(12), C I 495F(3), E C E 451(3), E C E 479(3), KINES 126(1.5), KINES 127(1.5), LL ED 400(3), LL ED 401(3), LL ED 402(3), MTHED 420(3), MUSIC 241(3), SCIED 458(3), SPLED 400(4), SPLED 403A(3), SS ED 430(3) (Sem: 5-8)

ADDITIONAL COURSES (6-7 credits)

Select 3-4 credits from: EDPSY 101 GQ(3); STAT 100 GQ(3); STAT 200 GQ(4) (Sem: 1-4) AND
 Any MATH GQ course (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (27 credits)

Select 3 credits in of Economic Geography (GS;US;IL) (Sem: 1-4)
 Select 3 credits in literature (GH) (Sem: 1-4)
 Select 3 credits of US History (GS;US;IL) (Sem: 1-4)
 Select 9 credits: 3 credits each (including one course with a lab) from biological science, earth science, and physical science (GN) (Sem: 1-6)

Select 3 credits on family and relationships from:

E C E 453(3), HD FS 315 US(3), HD FS 415(3), HD FS 418(3), HD FS 424 US(3), HD FS 431(3), SOC 030 GS(3), or WL ED 444(3) (Sem: 1-4)

Select 6 credits of educational selections from:

APLNG 484(3), APLNG 493 IL(3), C I 405(3), CMAS 465(3), DANCE 412(3), E C E 452(3), E C E 454(3), EDLDR 409(3), EDLDR 476(3), EDLDR 480(3), EDPSY 421(3), EDTHP 401 IL(3), EDTHP 447 US(3), EDTHP 412(3), EDTHP 416 US(3), EDTHP 420(3), EDTHP 427(3), EDTHP 430(3), EDTHP 435(3), EDTHP 440(3), EDTHP 441(3), EDTHP 447 US(3), EDUC 302(3), EDUC 466(3), EDUC 467(3), EDUC 468(3), HD FS 301(3), HD FS 311(3), HD FS 315 US(3), HD FS 330(6), HD FS 411(3), HD FS 412(3), HD FS 418(3), HD FS 424 US(3), HD FS 428(3), HD FS 429(3), HD FS 430(6), HD FS 432(3), HD FS 440(3), HD FS 447(3), HD FS 499 IL(1-12), LDT 400(3), LL ED 450(3), LL ED 462(3), LL ED 464(3), SPLED 401(4), SPLED 409A(3), SPLED 409B(3), SPLED 409C(3), SPLED 419(3), SPLED 454(4), SPLED 461(3), WL ED 400(3), WL ED 444(3) or WL ED 483(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-054

Review Date: 8/23/2016

R & T: 01/14/2014

ED

Community, Environment, and Development

University Park, College of Agricultural Sciences (CED)

PROFESSOR LELAND GLENN, Program Coordinator

The principal goal of the Community, Environment, and Development (CED) major is to develop the knowledge and skills of undergraduate students to enable them to assist local people, their communities, and institutions effectively understand, respond to and ultimately shape economic and social changes, including those that pose risks to the environment. The CED major focuses on the fields of community and economic development, environment and natural resources, and the critically important interactions between these fields, both locally and globally. Building skills and knowledge to tackle important environment and development issues facing communities today requires a multidisciplinary or transdisciplinary program; the major bridges the disciplines of agricultural, environmental and regional economics on the one hand and rural sociology on the other. Foundation (Level I) courses introduce students to key concepts in economics and sociology, and examine how these disciplines contribute to the basic content knowledge encompassing community and economic development and environmental economics and sociology. Level II courses build on the Foundation courses by extending the content knowledge to address the interrelationship between environment and natural resources and community and economic development. Coursework in Methods, Quantification and Communication is also required, including methods and techniques such as Geographical Information Systems and Geographical Information Analysis, statistics and survey research methods. Finally, students select among three options: (1) Community and Economic Development, (2) Environmental Economics and Policy, and (3) International Development. Students specialize in an option that further allows them to develop skills and competencies matching their specific education and career goals. It is expected that some students completing the program will choose to attend graduate school or law school, while others will choose employment after graduation.

For the B.S. degree in Community, Environment, and Development, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION, or REQUIREMENTS FOR THE MAJOR course selections)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 6-8 credits

REQUIREMENTS FOR THE MAJOR: 88-90 credits

(This includes 21 credits of General Education courses: 6 credits of GQ courses, 6 credits of GS courses, 9 credits of GWS.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 58-60 credits

PRESCRIBED COURSES (40 credits)

CED 152(3) [1], CED 201(3) [1], CED 230(3) [1], ENGL 015 GWS(3) (Sem: 2)
ECON 104 GS(3), GEOG 160 GS(3) (Sem: 3)
CAS 100 GWS(3), CED 309(3) [1], CED 427(3) [1], STAT 200 GQ(4) (Sem: 4)
CED 417(3) (Sem: 5)
CED 404(3) (Sem: 6)
CED 475(3) (Sem: 8)

ADDITIONAL COURSES (18-20 credits)

AGBM 101 GS(3) or ECON 102 GS(3) (Sem: 1)
RSOC 011 GS:US(3) or SOC 001 GS(3) (Sem: 1)
MATH 022 GQ(3) or MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1)
CMPSC 101 GQ(3) or CMPSC 203 GQ(4) (Sem: 3)
PLSC 001 GS(3) or PLSC 003 GS (3) or PLSC 014 GS(3) (Sem: 3)
ENGL 202A GWS(3), ENGL 202B GWS:IL(3), ENGL 202C GWS:IL(3), or ENGL 202D GWS(3) (Sem: 5)

REQUIREMENTS FOR THE OPTION: 30 credits

COMMUNITY AND ECONOMIC DEVELOPMENT OPTION (30 credits)

PRESCRIBED COURSES (9 credits)

SOC 023 GS(3) (Sem:5)
AEE 460(3) (Sem:7)
CED 409(3) (Sem: 8)

ADDITIONAL COURSES (9 credits)

CED 430(3) or CEDEV 430(3) (Sem: 5)
CEDEV 452(3) or CED 452(3) (Sem:6)
ERM 411(3) or BLAW 425(3) (Sem: 7)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credit in specialization (Sem: 5-8)

ENVIRONMENTAL ECONOMICS AND POLICY (30 credits)

PRESCRIBED COURSES (12 credits)

ECON 302 GS(3) (Sem:5)
CED 431(3), ECON 428(3) (Sem:7)
CED 429(3) (Sem: 8)

ADDITIONAL COURSES (3 credits)

ERM 411(3) or BLAW 425(3) (Sem:7)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 3 credits of Environmental Science from approved department list.
Select 12 credits in specialization (Sem: 5-8)

INTERNATIONAL DEVELOPMENT OPTION (30 credits)

PRESCRIBED COURSES (18 credits)

SOC 023 GS(3), RSOC 470(3) (Sem: 5)
CED 410(3) (Sem: 6)
CED 425(3), CED 450 IL(3) (Sem: 7)
CED 420 US:IL(3) (Sem: 8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

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Select 12 credit in specialization (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-001

Review Date: 08/20/13

[Comments](#)

AG

Publications updated coordinator: 3/1/12

Computer Engineering

Penn State Erie, The Behrend College (CENBD)

This major provides students with a strong foundation in computer engineering through a combination of classroom study, design projects, and laboratory experience. Analysis and design of computer hardware and software systems are stressed. Built upon a core of science and mathematics courses, this major has the objective of educating graduates to be problem solvers. Students acquire the ability to work as members of a team toward successful attainment of a common goal, preparing them for industry or further study in graduate school. In addition, written and oral communication skills are developed from an early stage, culminating in a senior design project that stresses communication as well as engineering content.

In addition to completing a broad-based science core in mathematics, chemistry and physics, students pursue their interest in computer engineering by studying principles in digital hardware design, computer architecture, computer software, microelectronics, and computer data communications. The student will be required to analyze and solve a significant computer engineering design problem during the senior year.

Entrance Requirement: In addition to the Carnegie unit and minimum GPA requirements described by University policies, all students applying for entrance to any of the engineering majors at Behrend College must have at least a 2.0 cumulative GPA by the end of the semester prior to applying for entrance to the major and have completed, with a minimum grade of C: CHEM 110 GN(3), MATH 140 GQ(4), MATH 141 GQ(4), and PHYS 211 GN(4). These courses must be completed by the end of the semester during which the admission to major process is carried out.

For the B.S. degree in computer engineering, a minimum of 130 credits is required. Each student must earn at least a grade of C in each 300-and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of the 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 1 credit

REQUIREMENTS FOR THE MAJOR: 105 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses; 3 credits of GS courses)

PRESCRIBED COURSES (93 credits)

CHEM 110 GN(3)[\[1\]](#), CHEM 111 GN(1)[\[1\]](#) (Sem: 1-2)

CMPE 271(3)[\[1\]](#), CMPSC 121 GQ(3), CMPSC 122(3)[\[1\]](#), CMPE 275(1)[\[1\]](#), CMPSC 360(3)[\[1\]](#), EE 210(4)[\[1\]](#), ENGL 202C GWS(3), MATH 140 GQ(4)[\[1\]](#), MATH 141 GQ(4)[\[1\]](#), MATH 220 GQ(2-3)[\[1\]](#), MATH 230(4)[\[1\]](#), MATH 250(3)[\[1\]](#), PHYS 211 GN(4)[\[1\]](#), PHYS 212 GN(4), PHYS 214 GN(2) (Sem: 1-4)

CMPE 411(3)[\[1\]](#), CMPE 352(3)[\[1\]](#), CMPE 371(3)[\[1\]](#), CMPE 431(3)[\[1\]](#), CMPSC 465(3)[\[1\]](#), EE 310(4)[\[1\]](#), CMPE 351(3)[\[1\]](#), EE 352(4)[\[1\]](#), STAT 301(3)[\[1\]](#) (Sem: 5-6)

CMPE 461(3)[\[1\]](#), CMPE 441(3)[\[1\]](#), CMPE 480(3)[\[1\]](#), CMPE 481(3)[\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits of technical elective courses from school-approved list. (Sem: 7-8)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-4.

Last Revised by the Department: Summer Session 2001

Blue Sheet Item #: 29-01-016

Review Date: 01/17/02

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

BD

Chemical Engineering

University Park, College of Engineering (CH E)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR PHILLIP E. SAVAGE, Head, Department of Chemical Engineering

Chemical Engineering is one of the most versatile professions--you'll find Chemical Engineers employed in a broad array of industries ranging from pharmaceutical and biotechnical companies to semiconductor manufacturing to start-up companies converting the latest laboratory discoveries to large-scale commercial production. Chemical Engineers work with catalysts to develop new ways to manufacture medicines and plastics; they develop control systems that enable the safe production of products from semiconductors to household soap; they design chemical and petroleum plants; they research the effects of artificial organs on blood flow; and they develop the equipment and processes necessary for advances in biotechnology. While chemistry emphasizes the facts and principles of science, chemical engineering emphasizes its practical application for the development of new products and processes.

The undergraduate program in Chemical Engineering provides students with fundamental skills in problem solving, analysis, and design, along with hands-on experience in practical applications. The curriculum builds upon the traditional foundation in the chemical and energy-related industries and introduces new material in the life sciences, polymers, and environmental fields.

Program Educational Objectives:

The educational objectives of the undergraduate program in Chemical Engineering are specifically designed to produce graduates who will be able to:

1. identify and pursue their personal and professional goals using the foundation provided by the breadth of educational opportunities in chemical and biomolecular engineering offered at Penn State
2. pursue careers as practicing chemical engineers in traditional chemical and energy-related universities as well as in expanding areas of materials, environmental, biomedical, and biotechnology
3. apply their broad chemical engineering education--including their problem solving, analytical, design, research, and communication skills--in industry, government agencies, financial institutions, consulting firms, educational institutions, business, law, and medicine
4. provide the technical, educational, business, and political leadership needed in today's rapidly changing, increasingly technological, global society.

Program Outcomes (Student Outcomes):

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHSY 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

For the B.S. degree in Chemical Engineering, a minimum of 133 credits is required. This baccalaureate program in Chemical Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 115 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (84 credits)

CHEM 110 GN(3)[1], CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), EDSGN 100(3), MATH 140 GQ(4)[1], MATH 141 GQ(4)[1], PHYS 211 GN(4)[1] (Sem: 1-2)
BMB 251(3), CHE 210(3)[1], CHE 220(3)[1], CHE 230(1), CHE 300(1), CHE 320(3)[1], CHE 330(3), CHE 340(3), CHE 350(3)[1], CHEM 210(3), CHEM 212(3), CHEM 213(2), CHEM 457(2), MATH 231(2), MATH 251(4), PHYS 212 GN(4), ENGL 202C GWS(3) (Sem: 3-6)
CHE 410(3)[1], CHE 430(3)[1], CHE 452(3), CHE 470(3), CHE 480W(3) (Sem: 7-8)

ADDITIONAL COURSES (10 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)

ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

ECON 102 GS(3), ECON 104 GS(3), or ECON 14 GS(3) (Sem: 1-6)

CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)

SUPPORTING COURSE AND RELATED AREAS (21 credits)

Select 3 credits of physical chemistry from departmental list (Sem: 5-8)

Select 3 credits of materials elective from departmental list (Sem: 5-8)

Select 6 credits in 400-level chemical engineering electives from departmental list (Sem: 5-8)

Select 3 credits of approved engineering electives from departmental list (Sem: 5-8)

Select 6 credits of professional electives from department list [31] (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[31] Students may substitute 6 credits of ROTC for part of this requirement in consultation with department.

[91] "...senior, undergraduate students with an average of at least 3.5, and certain other students with averages of at least 3.00 who have been granted special permission to enroll through the Office of Graduate Enrollment Services." Penn State University 2003-2004 Graduate Degree Programs Bulletin. Instructor approval is also required.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-03-020

Review Date: 11/14/2017

R & T: Approved 5/24/2013

UCA Revision #1: 8/3/06

UCA Revision #2: 7/26/07

EN

Chemistry

University Park, Eberly College of Science (CHEM)

PROFESSOR Mark Maroncelli, Assistant Head for Undergraduate Education

This major provides a strong foundation in the theory and practice of chemistry. Mathematics and physics are emphasized, since these subjects are essential to the understanding of chemistry. Courses in English and electives ensure study in non-technical subjects which broaden the student's general education and enables him or her to relate the major to other fields of knowledge.

In order to be eligible for entrance to the Chemistry major, a student must have: 1) Attained at least a 2.00 cumulative grade-point average. 2) Completed CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 210(3), MATH 140 GQ(4), and MATH 141 GQ(4); earned a grade of C or better in each of these courses; and earned a combined grade point average of at least 2.50 in these courses. (Note: If courses are repeated, only the higher grade will be used in this calculation.)

For the B.S. degree in Chemistry, a minimum of 125 credits is required with a cumulative grade point average of at least a 2.00 in these courses. A grade of C or better is required in all courses within the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR: 1-3 credits

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 94 credits

(This requirement includes 15 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses.)

PRESCRIBED COURSES (54 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), CHEM 112 GN(3) [\[1\]](#), CHEM 113 GN(1) [\[1\]](#), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#) (Sem: 1-2)

PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2) (Sem: 1-4)

MATH 231(2) (Sem: 3-4)

CHEM 210(3) [\[1\]](#), CHEM 212(3) [\[1\]](#), CHEM 213(2) [\[1\]](#), CHEM 227(4) [\[1\]](#), CHEM 310(3) [\[1\]](#), CHEM 316(1), CHEM 450(3) [\[1\]](#), CHEM 452(3) [\[1\]](#), CHEM 457(2) [\[1\]](#) (Sem: 5-6)

ADDITIONAL COURSES (23 credits)

Select 3 credits from MATH 250(3) or STAT 401(3) (Sem: 5-8)

Select 4 credits from advanced laboratory courses [\[1\]](#): CHEM 423W(4), CHEM 425W (4), CHEM 431W(4), CHEM 459W(4) (Sem: 5-8)

Select 16 credits of chemistry at the 400 level [\[1\]](#). Up to 6 co-op credits (2 each of SC 295, SC 395, SC 495) may be used in this category. Chemical Research, CHEM 494(1-10) may be used, but the total of CHEM 494 credits plus co-op credits may not exceed 8. (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (17 credits)

These 17 credits may include any courses not on the Chemistry Department list of excluded courses except that CHEM 494 may not be used, and only one credit of each SC 295, SC 395, and SC 495 is allowed in this category. (Sem: 1-8)

Integrated B.S. in Chemistry/M.Ed. in Curriculum and Instruction

These Integrated Undergraduate/Graduate (IUG) degree programs combine the Bachelor of Science in Chemistry with the Master of Education in Curriculum and Instruction, Science Education emphasis. The programs are designed to be completed in five years. The programs enable highly qualified and motivated students to delve deeply into a scientific content area and to pursue graduate level preparation in the theory and practice of teaching.

For detailed instructions on applying to the program, please consult the "Application Process" section of the IUG description for the Chemistry B.S. degree in the *Undergraduate Bulletin*. Application materials to be submitted include an undergraduate transcript, statement of purpose, draft plan of study, two letters of recommendation, and concurrent submission of an application for master's study to the graduate program in Curriculum and Instruction, Science Education emphasis area. Additional details about the graduate application procedure can be found above in the section, "Admissions Requirements."

IUG students fulfill all degree requirements for a B.S. in the Eberly College of Science. If a student chooses to leave the program without completing M.Ed. requirements, he or she may still receive the relevant B.S. degree, after all B.S. requirements are completed.

For the M.Ed. degree, students must earn at least 30 credits at the 400/500 level, at least 18 of them at the 500 level. One graduate semester is devoted to full time student teaching. Additional graduate coursework is completed in a second graduate semester. Courses required for the M.Ed. degree include SCIED 552(3), SCIED 558(3), a 500-level EDTHP course (3), C I 590(1), C I 595(12), and a 500-level course in curriculum (e.g., C I 550(3)). Of these, SCIED 558(3) and C I 595(12) comprise the student teaching semester course load.

124 credits are required for the B.S. degree and 30 credits for the M.Ed. degree. The following courses may be double-counted toward both the B.S. and the M.Ed. degrees, up to a limit of 12 credits: EDTHP 500-level courses (3), SCIED 411(3) & SCIED 412(3), and SCIED 500-level courses. Note that at least 50% of credits proposed for double-counting must be at the 500 level.

There are a number of other requirements for Pennsylvania teacher certification, including state-required tests and clearances, as well as coursework that can be completed at either the undergraduate or graduate level. Some courses, not enumerated above, that are usually required to satisfy teacher certification requirements include C I 280(3), SPLED 400(3), and C I 495C(3). Please note that changes in Pennsylvania certification requirements are common; students should check the Certification FAQ page at the Penn State Science Education website for updates and clarification about the specific requirements that affect them, based on their admission date to the IUG program option. Note also that students in the IUG program option are not required to complete all Penn State teacher certification requirements in order to receive their B.S. and M.Ed. degrees, as long as they have completed the requirements for those degrees, as described in the undergraduate and graduate *Bulletins*. For example, a student who has completed all degree requirements but has not yet received a score for the Pennsylvania-required Biology PRAXIS exam may be awarded both of his or her earned degrees.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lasted Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-134

Review Date: 8/23/2016

UCA Revision #1: 8/3/06

SC

Chemistry

Penn State Erie, The Behrend College (CHMBD)

This major provides a strong foundation in chemistry and prepares students for graduate or professional programs and for careers with companies and agencies requiring chemistry or related areas. The major has four options that allow students to choose an area of specialization to meet their career goals. These options are: general chemistry, biochemistry, business, and chemistry education pre-certification. Students have the opportunity to participate in research with faculty members.

Entrance Requirement: In order to be eligible for entrance to the CHMBD major (all options), a student must have: (1) attained at least 29.1 credits and (2) earned at least a 2.00 cumulative grade-point average.

For the B.S. degree in Chemistry, a minimum of 124 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field and must have earned a minimum 2.00 grade-point average.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18-21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-6 credits

REQUIREMENTS FOR THE MAJOR: 92-102 credits

(This includes 18-24 credits of General Education courses. For the General Chemistry Option, and Biochemistry Option, 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses. For the Business Option, 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 3 credits of GWS courses. For the Chemistry Education Pre-Certification Option, 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 54 credits

PRESCRIBED COURSES (54 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), CHEM 112 GN(3) [\[1\]](#), CHEM 113 GN(1) [\[1\]](#), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#) (Sem: 1-4)

CHEM 210(3) [\[1\]](#), CHEM 212(3) [\[1\]](#), CHEM 213(2) [\[1\]](#), CHEM 221(4) [\[1\]](#), CHEM 316(1) (Sem: 3-6)

CHEM 400(1), CHEM 413(4), CHEM 431W(3), CHEM 440(3), CHEM 441(1), CHEM 443(1), CHEM 457(1), and CHEM 472(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 38-48 credits

GENERAL CHEMISTRY OPTION: (38 credits)

PRESCRIBED COURSES (14 credits)

CHEM 450(3), CHEM 452(3) and CHEM 457(1), ENGL 202C GWS(3) [\[1\]](#), MATH 230(4) [\[1\]](#) (Sem: 3-8)

ADDITIONAL COURSES (12 credits)

Select 3 credits from MATH 250(3) [\[1\]](#) or STAT 401(3) (Sem: 3-6)

Select 6 credits of 400-level CHEM courses (excluding CHEM 494, CHEM 495, and CHEM 496) (Sem: 5-8)

Select 3 credits from CHEM 494(1-12) or CHEM 496(1-18) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from school-approved list. (Students may apply up to 6 credits of ROTC.) (Sem: 1-8)

BIOCHEMISTRY OPTION: (44 credits)

PRESCRIBED COURSES (26 credits)

BMB 402(3), BIOL 110S GN(4) [\[1\]](#), BIOL 230W GN(4) [\[1\]](#) (Sem: 3-8)

ENGL 202C GWS(3) [\[1\]](#), MATH 230(4) [\[1\]](#) (Sem: 3-8)

BMB 403(1), CHEM 450(3), CHEM 452(3) and CHEM 457(1) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 3 credits from BMB 406(3), BMB 465(3), BIOL 322(3), MICRB 201(3) (Sem: 3-8)

Select 3 credits from MATH 250(3) [\[1\]](#) or STAT 401(3) (Sem: 3-6)

Select 3 credits of 400-level CHEM courses (excluding CHEM 494, CHEM 495, and CHEM 496) (Sem: 5-8)

Select 3 credits from CHEM 494(1-12) or CHEM 496(1-18) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from school-approved list. (Students may apply up to 6 credits of ROTC.) (Sem: 1-8)

BUSINESS OPTION: (46-47 credits)

PRESCRIBED COURSES (22 credits)

ECON 102 GS(3) [\[1\]](#), ENGL 202D GWS(3) [\[1\]](#), MGMT 301(3), MKTG 301(3) (Sem: 3-8)

CHEM 496(3) (Sem: 5-8)

SCM 200 GQ(4) [\[1\]](#), STAT 401(3) (Sem: 3-6)

ADDITIONAL COURSES (18-19 credits)

CHEM 450(3) or CHEM 452(3) (Sem: 5-6)

Select 6 credits of 400-level CHEM courses (excluding CHEM 494, CHEM 495, and CHEM 496) (Sem: 5-8)

Select 9-10 credits in one of the following sequences:

a) SCM 310(3), MGMT 331(3), MGMT 410(3), MGMT 420(3) (Sem: 5-8)

b) MKTG 342(3), MKTG 330(3), MKTG 327(3), MKTG 410(3), MKTG 428(3) (Sem: 5-8)

c) CMPSC 203 GQ(4), MIS 204(3), MIS 336(3), MIS 430(3), MIS 445(4) (Sem: 5-8)

d) One selection each from a), b), and c) above (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from school-approved list. (Students may apply up to 6 credits of ROTC.) (Sem: 1-8)

CHEMISTRY EDUCATION PRE-CERTIFICATION OPTION: (47-48 credits)

This option helps prepare students for chemistry education teaching positions in secondary schools. It includes the academic requirements for the Chemistry Education Instructional I certificate issued by the Pennsylvania Department of Education.

PRESCRIBED COURSES (26-27 credits)

CHEM 450(3), CHEM 452(3) and CHEM 457(1), ENGL 202C GWS(3)[\[1\]](#), MATH 230(4)[\[1\]](#), PSYCH 100 GS(3)[\[1\]](#) (Sem: 3-8)
EDPSY 014(3) taken concurrently with CI 295(1), EDTHP 115 US(3) taken concurrently with CI 295(1) (Sem:3-8)
CHEM 395(1-2) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)

Select 3 credits from MATH 250(3)[\[1\]](#) or STAT 401(3) (Sem: 3-6)
Select 6 credits of 400-level CHEM courses (excluding CHEM 494, CHEM 495, and CHEM 496) (Sem: 5-8)
Select 3 credits from CHEM 494(1-12) or CHEM 496(1-18) (Sem: 5-8)
HDFS 129 GS(3)[\[84\]](#) or PSYCH 212 GS(3)[\[84\]](#) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from school-approved list. (Students may apply up to 6 credits of ROTC.) (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-04-017

Review Date: 01/10/2012

ETM revision: 1/15/2013

UCA Revision #1: 10/10/06

UCA Revision #2: 7/26/07

BD

Chinese

University Park, College of the Liberal Arts (CHNS)

PROFESSOR ON-CHO NG, *Department Head, Asian Studies*

Currently more than a billion people speak Chinese, making it one of the most widely spoken languages in the world. As a rising superpower with an increasingly global impact, China is a major international presence. The major in Chinese is designed to develop skills in speaking, understanding, reading, and writing Chinese, as well as to promote an understanding of the diverse literatures, cultures, and traditions of the Chinese-speaking world, ranging from China itself to Chinese-speaking America. The major can help students prepare for professional careers in which knowledge of Chinese, especially Mandarin, is useful. Students are strongly encouraged to study abroad.

Students planning to teach in public schools should schedule the appropriate courses leading to certification in consultation with an adviser in the College of Education.

For the B.A. degree in Chinese, a minimum of 124 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(0-9 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 20-28 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in front of *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 35 credits^[1]
(This includes 0-9 credits of General Education GA, GH, or GS courses.)
(At least 21 credits must be at the 400 level.)
(Students are strongly encouraged to take at least 12 of their credits as part of a study abroad program in a Chinese-speaking location. For curricular sequencing, the program encourages students to pursue this Education Abroad experience in the summer or fall semester of the junior year.)

PRESCRIBED COURSES (20 credits)
CHNS 110 IL(4) (Sem: 3-4)
CHNS 401 IL(4), CHNS 402 IL(4) (Sem: 5-6)
CHNS 403(4), CHNS 404 IL(4) (Sem: 7-8)

ADDITIONAL COURSES (9 credits)
Select 3 credits from CHNS 120 GH;IL(3) or CHNS 121 GH;IL(3) (Sem: 1-6)
Select 3 credits from the CHNS 420-429 level (3) (Sem: 1-8)
Select 3 credits from the CHNS 450-459 level (3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)
Select 6 credits pertaining to China, such as courses in art history, Asian studies, comparative literature, economics, geography, history, philosophy, political science, religious studies, theatre arts, or other fields, selected from departmental list. (Sem: 1-8)

Integrated Undergraduate-Graduate (IUG) Degree Program B.A. in Chinese and Master of International Affairs (M.I.A.)

The integrated undergraduate-graduate (IUG) degree program (B.A. in Asian Studies, Chinese, or Japanese/M.I.A. in International Affairs) provides an opportunity for strong students in these majors to complete a master's degree with 5 total years of study.

An increasingly globalized economy is likely to escalate the demand for graduate training in international affairs. The career choices for graduates with this training will also expand sharply.

The integrated degree program prepares students for a variety of careers requiring an interdisciplinary background in Asian Studies or Asian languages and international affairs. Examples of types of entities hiring in these areas are federal, state, and local governments, international organizations, multinational corporations, international banking and financial institutions, media organizations and journalism, consulting firms, policy research centers, and development assistance programs and foundations. The School of International Affairs (SIA) Master of International Affairs (M.I.A.) represents a professional degree designed to prepare students to thrive in these increasingly global career paths.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the *Graduate Bulletin*.

The number of openings in the integrated B.A./M.I.A. program is limited. Admission will be selective based on specific criteria set by the School of International Affairs. Students shall be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of the expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study. Students must be admitted to the program prior to taking the first course they intend to count towards the graduate degree. Specific requirements:

1. Must be enrolled in the Asian Studies, Chinese, or Japanese B.A. program.
2. Must apply to and be accepted into The Graduate School and the M.I.A. program in the School of International Affairs. Students must complete the [Graduate School application](#). All applicants will submit GRE scores, two letters of recommendation, and a personal statement addressing their reasons for pursuing a graduate degree in international affairs and discussing their plans and goals.
3. Although the program has no fixed minimum grade point average, an applicant is generally expected to have a minimum overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
4. Must include a plan of study identifying undergraduate credits to be applied to the M.I.A. degree elective requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
5. Must provide written endorsement from the head of Asian Studies.

M.I.A. Requirements for the Integrated B.A./M.I.A.

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the *Graduate Bulletin*.

M.I.A. portion of the integrated B.A./M.I.A. will require the completion of a minimum of 42 graduate credits, at least 18 of which are from six core courses consisting of INTAF 801(3), 802(3), 803(3), 804(3), 506(3) and INTAF 590(3). The remaining credits are attained through completion of the approved elective courses. A minimum of 6 credits must be at the 500-level.

In addition to the core curriculum and elective courses, M.I.A. degree candidates must complete either: (i) a master's paper; or (ii) a supervised internship placement. If the first option is chosen and the candidate opts to complete a paper, he/she must complete 3 credits of INTAF 594. The master's paper will involve integrating and showing mastery of the subject matter of the student's curricular emphasis, and may also involve original research. If the second option is chosen, the candidate will complete 3 credits of INTAF 595. The student will participate in a supervised internship of sufficient depth and professionalism that will allow the student to experience the integration of his/her curricular studies in an actual professional environment. A reflective paper will be submitted as a part of this credit requirement.

In order to graduate, M.I.A. degree students also will need to demonstrate proficiency in a language other than English. Proficiency will be defined as follows: (i) four semesters of a Penn State language sequence or its equivalent (15 credits with a quality grade of B or better using a 4.0 scale); (ii) native acquisition, as shown by the candidate's personal history and approved by the SIA faculty; or (iii) performance on a proficiency evaluation sufficient to equal four semesters of language learning; for this purpose, either Penn State's proficiency certification process or another pre-approved proficiency assessment may be used. Language study does not provide credits towards the M.I.A. degree.

If students accepted into the IUG program are unable to complete the M.I.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

M.I.A. Degree	Integrated B.A./M.I.A. Degree
Core Courses (18)	Core Courses (18)
INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3)	INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3)
Electives (21)	Electives (21)
Course choices are from a pre-approved list in the SIA, or by SIA faculty-approved substitution.	A maximum of 12 credits may be double counted toward the B.A. and the M.I.A. Courses that may be double-counted include: ASIA 463, ASIA 465, ASIA 469, ASIA 475, ASIA 401, ASIA 481, ASIA 486, ASIA 400, ASIA 430, ASIA 501, ASIA 502, and ASIA 577.
Capstone (3)	Capstone (3)
Master's Paper (INTAF 594) or Internship (INTAF 595)	Master's Paper (INTAF594) or Internship (INTAF 595)

Courses that may be double-counted include: ASIA 463, ASIA 465, ASIA 469, ASIA 475, ASIA 476, ASIA 481, ASIA 486, ASIA 489, ASIA 493, ASIA 501, ASIA 502, and ASIA 577. No more than 6 of the double-counted credits may be at the 400-level. The graduate thesis or other graduate culminating/capstone experience (including any associated credits and/or deliverables) may not be double counted towards any other degree.

Tuition Charges, Grant-in-Aid, and Assistantships

Students admitted to the School of International Affairs through the IUG with a B.A. in Asian Studies, Chinese, or Japanese may be considered to receive financial assistance. Students on graduate assistantships must adhere to the [course load limits set forth in the Graduate Bulletin](#).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-042

Review Date: 4/5/2016

LA

Corporate Innovation and Entrepreneurship

University Park, Smeal College of Business (CIENT)

PROFESSOR DENNY GIOIA, Chair, Department of Management and Organization

The Corporate Innovation and Entrepreneurship major prepares students for challenges in the development of emerging products and new markets for demanding consumers. The ability to adapt to a rapidly changing social and business environment can yield great rewards and returns, but it requires innovative, multifunctional individuals able to adapt to and develop new technologies, innovations and businesses amid a wider environment of change, uncertainty and ambiguity. The major is conceived for students interested in starting and managing new businesses or re-inventing current business with the intent of growing the economy and providing jobs for a diverse workforce. The major will focus on developing problem solving and creative thinking skills, along with the ability to recognize opportunities, spot trends, and develop a plan to capitalize on these ideas. Emerging entrepreneurs and innovative managers of small to large businesses must be competent in various mediums of communication, have good negotiation skills, can lead with ethics and integrity, and are grounded in business aspects of planning, capital investing, goal setting, and decision making.

Entrance Requirement: To be eligible for entrance into the Corporate Innovation and Entrepreneurship (CIENT) major, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy requirements for entrance to the major.

Specific entrance requirements include:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4)[1]; ECON 102 GS(3), SCM 200 GQ(4)[1] or STAT 200 GQ(4)[1]; ENGL 015 GWS(3) or ENGL 030 GWS(3); MATH 110 GQ(4)[1] or MATH 140 GQ(4)[1]; FIN 301(3)[1]; MKTG 301(3)[1]; and MGMT 301(3)[1]. These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu>).

Degree Completion: Students accepted into the Corporate Innovation and Entrepreneurship major are expected to enroll at University Park the fall semester after the entrance-to-major process has concluded. In addition, Senate Policy 83-80.5 stipulates that the college dean and program faculty may require up to 24 credits of course work in the major to be taken in the college where the degree is earned. Based on this policy, the Smeal College of Business has set the following credit earning limitations for CI&E majors:

1. Fifteen credits of 300/400 level prescribed and additional courses in the major field must be completed with Management faculty at University Park.

Nine additional credits of 300/400 level related and supporting courses must also be completed at University Park. See the Corporate Innovation and Entrepreneurship Recommended Academic Plan or the M&O Department website for further details.

For the B.S. degree in Corporate Innovation and Entrepreneurship, a minimum of 120 credits is required (at least 15 credits must be taken at the 400 level).

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(12 of these 45 credits are included in the **REQUIREMENTS FOR THE MAJOR**)
(See description of General Education in front of Bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES AND INTERNATIONAL COMPETENCE:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14 credits

REQUIREMENTS FOR THE MAJOR: 73 credits
(This includes 12 credits of General Education courses: 3 credits of GWS courses; 6 credits of GQ courses; 3 credits of GS courses.)

PRESCRIBED COURSES (52 credits)
ACCTG 211(4)[1], ECON 102 GS(3), FIN 301(3)[1], MGMT 301(3)[1], MKTG 301(3)[1] (Sem: 1-4)
BA 342(3), BA 411(3), BLAW 341(3), ECON 104 GS(3), ENGL 202D GWS(3), MGMT 425(3)[1], MGMT 426(3)[1], MGMT 427(3)[1], MGMT 451(3)[1], MGMT 453(3)[1], MIS 204(3), SCM 301(3) (Sem: 5-8)

ADDITIONAL COURSES (8 credits)
MATH 110 GQ(4)[1] or MATH 140 GQ(4)[1] (Sem: 1-2)
SCM 200 GQ(4)[1] or STAT 200 GQ(4)[1] (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (13 credits)
Select 4 credits: Attainment of 12th credit level proficiency in a single foreign language (4 credits). Proficiency must be demonstrated by either examination or course work. (Sem: 1-4)
Select 3 credits of related coursework. See Department List (Sem: 5-8)
Select 6 credits of supporting coursework from an approved department list. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2014

Blue Sheet Item #: 43-01-022

Review Date: 08/19/2014

R & T #275 SCR:43-04 1/13/2015

Criminal Justice

Abington College (CJAAB)
 Altoona College (CJBA)
 Penn State Berks (CJABL)

PROFESSOR Peter M. Hopsicker, Division Head, Division of Education, Human Development, and Social Sciences

Students receiving a baccalaureate degree in criminal justice should understand each of the three main components of the criminal justice system and their interrelationships, be able to evaluate critically both current and future crime control policy proposals and criminal justice research, and understand the complexity of the crime phenomenon and its relationship to individual, social, and cultural factors. This major includes study in law enforcement, courts and corrections individually and as components of a system, plus work in theories of crime causation, and crime control policy. Students should expect reading, writing, and critical thinking skills to be rigorously applied and developed throughout the degree program. The Bachelor of Arts degree in Criminal Justice provides a broadly based liberal arts background for the study of crime, justice and the criminal justice system. The Bachelor of Science degree offers an opportunity for educational enrichment in fields not traditionally considered part of the liberal arts. Either degree is excellent preparation for a career in criminal justice, graduate, or professional study, or informed citizenship.

For the B.A. degree in Criminal Justice, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
 (10-13 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
 (Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
 (Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
 (Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 12-15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
 (3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
 (See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 49 credits^[1]
 (This includes 10-13 credits of General Education courses; 0-3 credits of GH courses; 4 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (34 credits)
 CRIMJ 100(3), SOC 012 GS(3), SOC 119 GS;US(4), STAT 200 GQ(4) (Sem: 1-4)
 CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3), CRIMJ 290(2)(Sem: 3-6)
 CRIMJ 441(3), CRIMJ 450W(3), CRIMJ 495(3) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)
 PHIL 103 GH(3) or CRIMJ 465(3) (Sem: 1-4)
 CRIMJ 250W(3) or SOC 207(3)
 Select 9 credits from any 400-level CRIMJ course that does not already fulfill another requirement in the major. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-016

Review Date: 8/23/16

UCA Revision #1: 8/3/06
 UCA Revision #2: 7/27/07

AL

Criminal Justice

Abington College (CJSAB)
 Altoona College (CJBS)
 Penn State Berks (CJSBL)

PROFESSOR Peter M. Hopsicker, Division Head, Division of Education, Human Development, and Social Sciences

Students receiving a baccalaureate degree in criminal justice should understand each of the three main components of the criminal justice system and their interrelationships, be able to evaluate critically both current and future crime control policy proposals and criminal justice research, and understand the complexity of the crime phenomenon and its relationship to individual, social, and cultural factors. This major includes study in law enforcement, courts and corrections individually and as components of a system, plus work in theories of crime causation, and crime control policy. Students should expect reading, writing, and critical thinking skills to be rigorously applied and developed throughout the degree program. The Bachelor of Arts degree in Criminal Justice provides a broadly based liberal arts background for the study of crime, justice and the criminal justice system. The Bachelor of Science degree offers an opportunity for educational enrichment in fields not traditionally considered part of the liberal arts. Either degree is excellent preparation for a career in criminal justice, graduate, or professional study, or informed citizenship.

For the B.S. degree in Criminal Justice, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(10-13 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 27-30 credits

REQUIREMENTS FOR THE MAJOR: 57 credits[\[1\]](#)

(This includes 10-13 credits of General Education courses: 0-3 credits of GH courses; 4 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (33 credits)

CRIMJ 100(3), SOC 012 GS(3), SOC 119 GS;US(4), STAT 200 GQ(4) (Sem: 1-4)
 CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3), CRIMJ 290(1)(Sem: 3-6)
 CRIMJ 441(3), CRIMJ 450W(3), CRIMJ 495(3) (Sem: 5-8)45

ADDITIONAL COURSES (15 credits)

PHIL 103 GH(3) or CRIMJ 465(3) (Sem: 1-4)

CRIMJ 250W(3) or SOC 207(3)

Select 9 credits from any 400-level CRIMJ course that does not already fulfill another requirement in the major. (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits, in consultation with the adviser, in one or two of the following skill enhancement areas: accounting, computers, composition and rhetoric, counseling, education, law and legal studies, foreign language, management, public speaking, research methods and statistics, science and engineering, biobehavioral health; or in the following topics: adolescence, deviant behavior, drugs, minorities (Sem: 3-6)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-017

Review Date: 8/23/16

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

AL

Criminology

University Park, College of the Liberal Arts (CRMBA)

PROFESSOR JOHN ICELAND, *Head, Department of Sociology, and Crime, Law, and Justice*

(The Bachelor of Arts degree in Criminology is offered by the Criminology Program in the Department of Sociology.)

This major provides students with a broadly based liberal education focused on the understanding and analysis of crime and justice systems. Students obtain a foundation of knowledge of the basic components of the criminal justice and legal systems as well as abilities to solve problems, think and read critically, and write effectively within the context of criminal justice and criminological research and theory.

The B.A. degree is suitable for students seeking entry-level positions in the criminal justice system and for students interested in graduate and law school. Students interested in acquiring strong quantitative skills should consider the B.S. degree.

For the B.A. degree in Criminology, a minimum of 121 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 16 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 40 credits^[1]

(This includes 4 credits of General Education GQ courses.)

PRESCRIBED COURSES (16 credits)

CRIM 100 GS(3)/CRIMJ 100 GS(3), CRIM 12 GS(3)/CRIMJ 12 GS(3)/SOC 12 GS(3) (Sem: 1-4)

CRIM 249(3), STAT 200 GQ(4), CRIM 250W(3) (Sem: 1-8)

ADDITIONAL COURSES (24 credits)

Select 3 credits from: CAS 283(3), CMPSC 100(3), CMPSC 101 GQ(3) (Sem: 1-8)

Select 3 credits from: SOC 1 GS(3), SOC 3 GS(3), or SOC 5 GS(3) (Sem: 1-8)

Select 6 credits from the core courses: CRIM 430(3), CRIM/CRIMJ 432(3), CRIM 435(3), CRIM/CRIMJ 451 US(3), CRIM/CRIMJ/WMNST 453 US(3), CRIM/CRIMJ/SOC 467(3), CRIM 490(3) (Sem: 5-8)

Select 6 credits from non-core CRIM/CRIMJ courses at the 400 level (Sem: 5-8): (including no more than 3 credits of LA 496, CRIM 494, or CRIM 499)

Select 6 credits in race, ethnicity and gender: AA 100 GA;IL(3); AA 101 US(3); AMST 105 GH;US(3); AMST 432(3); ANTH 146 GS;US(3); CAS 271 US;IL(3); CAS 455 US(3); CAS 471 US;IL(3); CMLIT 101 GH;US;IL(3); CRIM 451 US(3); CRIM 453 US(3); ENGL 135 GH;US(3); ENGL 139 GH;US(3); ENGL 462 US(3); HIST 154 GH;US(3); PHIL 9 GH;US(3); PSYCH 432 US(3); SOC 103 US(3); SOC 119 GS;US(4); SOC 409 US(3); SOC 419 US(3); SOC 429(3); WMNST 1 GS;US;IL(3); WMNST 104 GH;US(3); WMNST 136 US(3) (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-104

Review Date: 8/22/2017

UCA Revision #2: 7/27/07

LA

Publications updated department head: 12/02/11

Criminology

University Park, College of the Liberal Arts (CRMBS)

PROFESSOR JOHN ICELAND, Head, Department of Sociology, and Crime, Law, and Justice

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

This major provides the opportunity to develop a stronger foundation in research methods, quantification, and the sciences. It prepares students with relevant aptitudes for pursuing further studies or finding employment where such knowledge is advantageous. Students contemplating futures in social science research, business, forensics, public service, and paralegal positions should consider this degree or some of its recommended courses.

Either the B.A. or B.S. degree is suitable for students seeking entry level positions in the criminal justice system and for students interested in graduate and law school. Students interested in acquiring strong quantitative skills should consider the B.S. degree.

For the B.S. degree in Criminology, a minimum of 121 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 17-19 credits

REQUIREMENTS FOR THE MAJOR: 61-63 credits^[1]

(This includes 4 credits of GENERAL EDUCATION GQ courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 40 credits

PRESCRIBED COURSES (16 credits)

CRIM 12 GS(3)/CRIMJ 12 GS(3)/SOC 12 GS(3), CRIM 100(3)/CRIMJ 100(3), STAT 200 GQ(4) (Sem: 1-8)

CRIM 249(3), CRIMJ 250(3) (Sem: 2-4)

ADDITIONAL COURSES (24 credits)

Select 3 credits from: CAS 283(3), CMPSC 100(3), CMPSC 101 GQ(3) (Sem: 1-8)

Select 3 credits from: SOC 1 GS(3), SOC 3 GS(3), or SOC 5 GS(3) (Sem: 1-8)

Select 6 credits in race, ethnicity and gender:

AFAM 100 GS;US(3), AFAM 101 GH;US(3), AFAM/SOC/WMNST 103 US(3), AMST/WMNST 104 GH;US(3), AMST 105 GH;US(3), AMST 432(3), ANTH 146 GS;US(3), CAS 271 US;IL(3), CAS 422 US(3), CAS 455 US(3), CAS 471 US;IL(3), CMLIT 101 GH;US;IL(3), CRIM 451(3), CRIMJ/WMNST 453 US(3), ENGL 135 GH;US(3), ENGL 139 GH;US(3), ENGL 462 US(3), HIST 154 GH;US(3), LER/WMNST 136 US(3), PHIL 9 GH(3), PSYCH 432 US(3), SOC 119 GS;US(4), SOC 409 US(3), SOC 419(3), SOC 429(3) or WMNST 1 GS;US;IL(3) (Sem: 1-8)

Select 6 credits from the core courses CRIM 430(3), CRIM/CRIMJ 432(3), CRIM 435(3), CRIM/CRIMJ 451(3), CRIM/CRIMJ/WMNST 453(3), CRIM/CRIMJ/SOC 467(3), CRIM 490(3) (Sem: 5-8)

Select 6 credits from non-core CRIM/CRIMJ courses at the 400 level (including no more than 3 credits of LA 495, CRIM 494, or CRIM 499 (Sem: 5-8) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 21-23 credits

BUSINESS/PUBLIC ADMINISTRATION OPTION: (21 credits)

PRESCRIBED COURSES (6 credits)

ECON 102 GS(3), ECON 104 GS(3) (Sem: 1-8)

ADDITIONAL COURSES (15 credits)

Select 15 credits with at least 3 credits each from groups a, b, c, d (Sem: 3-8)

a) ECON 302 GS(3), BA 301(3)

b) BA 303(3), BA 304(3), PSYCH 281 GS(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3)

c) BLAW 243(3), LER 401(3), LER 434(3), LER 435(3), LER 437(3), SOC 455(3)

d) Select 3 credits from CAS 404(3), CAS 450W(3), CAS 452(3), CAS 471 US;IL(3), CAS 483(3), ENGL 418(3), ENGL 419(3), ENGL 421(3), GER 408 IL(3), HIST 458W(3), LER 400-level course(s), PLSC 412(3), PLSC 417(3), PLSC 419(3), PLSC 490(3), PLSC 444(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3), SOC 455(3), SOC 456(3), SPAN 412(3)

COMPUTING AND STATISTICS OPTION: (21 credits)

PRESCRIBED COURSES (5 credits)

SOC 470(4), STAT 480(1) (Sem: 5-8)

ADDITIONAL COURSES (16 credits)

Select 16 credits from CAS 483(3), CMPSC 203 GQ(4), MATH 110 GQ(4) and MATH 111 GQ(2) or MATH 140 GQ(4) and MATH 141 GQ(4); MIS 204(3); STAT 460(3), STAT 462(3) or STAT 464(3) (Sem: 1-8)

LEGAL STUDIES OPTION: (21 credits)

PRESCRIBED COURSES (3 credits)

PHIL 12 GQ(3) (Sem: 1-8)

ADDITIONAL COURSES (18 credits)

Select 3 credits from CAS 213(3), CAS 215(3), CAS 321(3) or CAS 250(3) (Sem: 3-8)

Select 12 credits from BLAW 243(3), CRIM 432(3) or CRIM 467(3)/SOC 467(3), CRIM 469(3), COMM 403(3), LST 370(3), PHIL 105 GH(3), PHIL 108 GH(3), PHIL 408(3), PLSC 403(3), PLSC 431(3), PLSC 432(3), PLSC 471(3), PLSC 472(3), SOC 405(3) (Sem: 5-8)

Select 3 credits from HIST 449 US(3), HIST 450 US(3), PLSC 474(3) (Sem: 5-8)

SOCIAL SCIENCE RESEARCH OPTION: (22-23 credits)

PRESCRIBED COURSES (5 credits)

SOC 470(4), STAT 480(1) (Sem: 5-8)

ADDITIONAL COURSES (17-18 credits)

Select 8-9 credits from MATH 110 GQ(4) and MATH 111 GQ(2) or MATH 140 GQ(4) and MATH 141 GQ(4), STAT 460(3), STAT 462(3), STAT 464(3) (Sem: 1-8)

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Select 9 credits from HDFS 401(3), PLSC 490(3), any 400-level STAT course (Sem: 5-8)

NOTE: Internships will be counted as elective credits (CRIM 395).

NOTE: The following themes should be incorporated into all CRIM classes, as appropriate: ethical issues, ethnicity and gender issues, and theory.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-105

Review Date: 08/22/17

Publications updated department head: 12/02/11

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

LA

Comparative Literature

University Park, College of the Liberal Arts (CMLIT)

PROFESSOR ROBERT R. EDWARDS, *Head*

Designed for students who want to study literature with an interdisciplinary and global perspective, the major in Comparative Literature crosses the boundaries of geography, time, nationalities, languages, and cultures. The world of literature taught draws upon readings from the Americas, Europe, Africa, Asia, and the Middle East, and from many historical periods. The range includes recognized great books along with less-known works, timeless myths and up-to-date graphic novels and video games, gender studies, colonial and postcolonial literatures, indigenous literatures, testimonies, legends, banned books, literatures of the occult, detective fictions, virtual worlds, and cultural theory, and more. Students engage with different languages and cultures, develop the critical skills for literary and cultural analysis, and relate literature to other media, including film and digital media. The major also encourages students to explore the relationship between literature and ethics through course offerings focused on transnational identities, human rights, cultures of globalization, and the problem of violence. A senior seminar clarifies the mysteries of literary theory and provides opportunities for individual projects.

Students majoring in Comparative Literature take courses in the Department of Comparative Literature and in other literature departments. They also develop competence in a foreign language. Study abroad is encouraged: students may count up to 18 Education Abroad credits toward the major. The department endeavors to provide all Comparative Literature majors with opportunities for an individualized "engaged scholarship" experience, such as an undergraduate research project, an opportunity to assist faculty in research or teaching, an internship, an experience studying or working abroad, etc.

Graduates of the Department of Comparative Literature have undertaken careers in teaching, completed advanced degrees in literature, librarianship, law, and similar fields, entered the Peace Corps or other types of government service, and pursued careers in writing and communications.

The department offers a minor in World Literature and a major/minor in Global and International Studies, as well as the major in Comparative Literature and an innovative integrated undergraduate-graduate degree through which students obtain both a B.A. and an M.A. in Comparative Literature.

For the B.A. degree in Comparative Literature, a minimum of 129 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(This is included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 27 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits

PRESCRIBED COURSES (9 credits) [\[1\]](#)

CMLIT 010 GH;IL(3), CMLIT 100 GH;IL(3) (Sem: 1-4)

CMLIT 400 US;IL(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (27 credits)

(Students must choose 27 credits from sections A, B, and C., including at least 15 credits at the 400 level.)

- a. Concentration, 6-18 credits. Students choose one of the following concentrations (Sem: 1-8): (1) Language Concentration: students select 6-18 credits in the study of a single world language and/or literature beyond the 12th credit level; see department list. (2) Student-designed Thematic Concentration: students select 6-18 credits of CMLIT courses, in consultation with their advisor, organized around a theme they devise, subject to their advisor's approval of a 1-page academic plan in which they explain their theme and the courses that fit into that theme.
- b. Literatures: select at least 6-18 credits in courses on literature. Up to 12 of these credits can be taken through departments other than Comparative Literature. Up to 18 credits may be taken as courses offered through an Education Abroad program with departmental approval. (Sem: 1-8)
- c. 3 credits in Comparative Literature at the 400 level. (Sem: 4-8)

Integrated B.A./M.A. Program in Comparative Literature (CMLIT)

The Department of Comparative Literature offers an integrated B.A./M.A. program that is designed to allow academically superior baccalaureate students to obtain both the B.A. and the M.A. degrees in Comparative Literature within five years of study. The first two years of undergraduate coursework include the University General Education and Liberal Arts requirements in addition to language and literature study in the major. In the third year, students are expected to define areas of interest in two primary literatures in different languages. In addition, students in the B.A./M.A. program should begin to undertake work in a second foreign language. The fourth year includes graduate-level work in methodology and the student's selection of primary literatures which replaces comparable 400-level senior year courses. The fifth and final year of the program typically consists of graduate work in Comparative Literature courses as well as the chosen literatures. The program culminates with an M.A. paper.

By encouraging greater depth and focus in the course of study beginning in the third undergraduate year, this program will help students more clearly define their area of interest and expertise in the otherwise vast field of international literatures. As a result, long-range academic planning for exceptional students pursuing doctoral degrees after leaving Penn State, or other professional goals, will be greatly enhanced. The student may also be more competitive in applying for admission to Ph.D. programs as well as for institutional and national grant monies and scholarships.

Admission Requirements

The number of openings in the integrated B.A./M.A. program is limited. Admission will be selective based on specific criteria and the unqualified recommendation of faculty. Applicants to the integrated program:

1. Must be enrolled in the Comparative Literature B.A. program [\[1\]](#).
2. Must have completed 60 credits of the undergraduate degree program (it is strongly suggested that students apply to the program prior to completing 100 credits).
3. Must be accepted without reservation into the M.A. program in Comparative Literature.
4. Should have a recommended overall GPA of 3.2 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
5. Must present a departmentally approved plan of study in the application process.
6. Must be recommended by the chairs of the Department's undergraduate and graduate committees.

A typical sequence of coursework for the integrated program would appear as follows:

Year One: 6 credits: CMLIT 010
CMLIT 100

Year Two: 6 credits: Foreign Language (beyond the 12-credit level)
6 credits: Courses in Literature

Year Three: 9 credits: 400-level courses in Literature, including CMLIT 400
(variable credits) Work in foreign language (credits do not count towards the major, but reading proficiency is required for the M.A. degree)

Year Four: 3 credits: CMLIT 501, 502 and/or 503
6 credits: Comparative Literature courses
6-9 credits: 500-level courses in Literatures (at least 3 credits in non-Anglophone literature)

Year Five	3 credits:	CMLIT 501, 502, and/or 503
	9-12 credits	500-level courses in Literatures (at least 3 credits in non-Anglophone literature)
	6 credits	500-level Comparative Literature Courses M.A. paper

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017(CMLIT); Spring Semester 2012 (Integrated B.A./M.A.)

Blue Sheet Item #: 45-04-071 (CMLIT); 40-06-143 (Integrated B.A./M.A.)

Review Date: 1/10/2017

LA

Computer Science

Penn State Erie, The Behrend College (CMPBD)

The goal of the Computer Science major at Behrend is to produce graduates with a firm foundation in the fundamentals of computer science along with a significant background in one or more of the natural sciences to provide context. Students are encouraged to pursue a minor in one of the natural sciences (biology, chemistry), math, or statistics. Students prepare for the major by taking lower-division courses in programming, discrete math, computer organization, and data communications. They then complete upper-division courses in data structures and algorithms, data base management systems, net-centric programming, programming language fundamentals, and operating systems, and systems programming.

Graduates of this program will be prepared for a wide variety of computer-oriented careers in business, industry, and government, particularly in areas that require the practical application of computer science concepts and techniques to solving problems in the natural sciences. In addition, graduates will be prepared to pursue graduate study in computer science or in computationally intensive sub-disciplines of the natural sciences, such as bio-informatics, computational biology, computational physics, or computational chemistry.

Entrance Requirement: To be eligible for entrance to the Computer Science (CMPBD) major, a student must have completed MATH 140 GQ(4), MATH 141 GQ(4), CMPSC 121 GQ(3), CMPSC 122(3), and one of the following: BIOL 110 GN(4), or CHEM 110 GN(3) and CHEM 111 GN(1) or PHYS 211 GN(4) with a grade of C or better in each of these courses.

For a B.S. degree in Computer Science, a minimum of 122-123 credits is required. A student enrolled in this major must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 1 credit

REQUIREMENTS FOR THE MAJOR: 97-98 credits

(This includes 21 credits of General Education courses: 6 credits of GQ courses, 6 credits of GWS courses, 9 credits of GN courses.)

PRESCRIBED COURSES (57 credits)

CMPSC 121 GQ(3) [\[1\]](#), CMPSC 122(3) [\[1\]](#), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), MATH 220 GQ(2) (Sem: 1-2)
CMPSC 221(3), CMPSC 312(3) [\[1\]](#), CMPSC 335(3) [\[1\]](#), CMPSC 360(3) [\[1\]](#), CAS 100A GWS(3), ENGL 202C GWS(3) (Sem: 3-4)
CMPSC 465(3) [\[1\]](#), STAT 301(3) [\[1\]](#) (Sem: 5-6)
CMPSC 431W(3) [\[1\]](#), CMPSC 461(3) [\[1\]](#), CMPSC 474(3) [\[1\]](#), CMPSC 421(3) [\[1\]](#), CMPSC 484(2) [\[1\]](#), CMPSC 485(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (25-26 credits)

Select one of the following sequences (10-11 credits):

- CHEM 110 GN(3), BIOL 110 GN(4), BIOL 220W GN(4) or BIOL 230W GN(4) or BIOL 240W GN(4) (Sem:1-2)
- CHEM 110 GN(3), CHEM 111 GN(I), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 210(3) (Sem: 1-2)
- PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2) or PHYS 214 GN(2) (Sem: 1-2)

Select at least 15 additional science credits from department approved list (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 6 credits from the school approved list [Students may apply 6 credits of ROTC] [Students may apply 6 credits of internship CMPSC 495] (Sem: 3-8)
Select 9 additional credits from CMPSC 302 or higher, CMPEN, SWENG. (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[18] A grade of C or better per course is required for teacher certification.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-016

Review Date: 8/22/17

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

BD

Computer Engineering

University Park, College of Engineering (CMPEN)

PROFESSOR CHITA DAS, Head of the Department of Computer Science and Engineering

The mission of the faculty of the undergraduate computer engineering program at Penn State is to provide students with the knowledge and experience needed to pursue a productive lifelong career in industry or to engage in further study at the graduate level. Students participate in a balanced program of instruction covering the basic principles of the design and application of computer systems. The program includes coverage in breadth and depth of basic science, engineering, and abstract concepts of information handling. Students specialize in and are prepared for careers in the design, analysis and use of hardware, software and systems. The program is structured to ensure that graduates have a clear understanding of the design and the applications of computers, as well as the ability to apply this knowledge throughout their professional careers.

Program Educational Objectives:

In particular, within a few years after graduation, graduates in computer engineering should be able to:

1. Work in industry or government producing or evaluating components of computer hardware and/or software systems.
2. Work in teams to design, implement, and/or maintain components of computer hardware and/or software systems.
3. Stay current through professional conferences, certificate programs, post-baccalaureate degree programs, or other professional educational activities.

Program Outcomes (Student Outcomes):

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Computer Engineering, a minimum of 128 credits is required. This baccalaureate program in Computer Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 110 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (78 credits)

CHEM 110 GN(3) [1], CMPSC 121 GQ(3) [1], MATH 140 GQ(4), MATH 141 GQ(4) [1], PHYS 211 GN(4) [1], PHYS 212 GN(4) [1] (Sem: 1-2)
CMPSC 122(3) [1], CMPSC 221(3) [1], CMPSC 360(3) [1], CMPEN 362(3), EE 210(4) [1], MATH 220 GQ(2-3), MATH 231(2), MATH 250(3) [1], PHYS 214 GN(2) (Sem: 3-4)
CMPEN 331(3) [1], CMPEN 431(3) [1], CMPSC 311(3) [1], CMPSC 465(3) [1], EE 310(4) [1], EE 353(3) [1], ENGL 202C GWS(3), STAT 418(3) (Sem: 5-6)
CMPEN 482(3), CMPSC 473(3) (Sem: 7-8)

ADDITIONAL COURSES (26 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
CMPEN 270(4) [1] or CMPEN 271(3) [1] and CMPEN 275(1) (Sem: 3-4)
ECON 014 GS(3), ECON 102 GS(3), ECON 104 GS(3), or EBF 200 GS(3) (Sem: 3-4)
Select 6 credits from CMPEN 411(3), CMPEN 416(3), CMPEN 417(3), CMPEN 454(3), CMPEN 455(3), CMPEN 471(3), CMPEN 472(3), CMPEN 473(3), CMPEN 475(3), EE 453(3), EE 456(3) (Sem: 5-8)
Select 6 credits from any 400-level CMPEN or CMPSC course (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from department list (Students may apply up to 3 credits of Co-op. Students who complete ROTC may apply up to 3 credits of ROTC as department list credits and 3 credits of ROTC as GHA credits.)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2012

Blue Sheet Item #: 41-01-036

Review Date: 8/14/2012

R & T: Approved 5/24/2013

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

EN

Computer Science

University Park, College of Engineering (CMPSC)

PROFESSOR CHITA DAS, Head, Department of Computer Science and Engineering

Computer Science is the study of computation, including its principles and foundations, its efficient implementation, its analysis, and its practical use in a wide range of different application areas. Computer Science is far more than just programming and no other science or engineering discipline has had a greater impact in such diverse areas as commerce, communication, entertainment, finance, medicine, the social sciences, the physical sciences and the life sciences. Computer Science impacts our daily lives in a multitude of ways and computer scientists are instrumental in driving these changes. Computer Science transforms the way we look at and live in our world.

The mission of our undergraduate program is to prepare our students for a wide range of careers as computer scientists, software engineers, software developers, and related positions in the field of computing. Our curriculum covers fundamental programming techniques and skills, broad knowledge of computer hardware, operating systems, programming languages, the mathematical foundations of computing, and advanced topics in software design and application development. Recurrent themes in the program include security, algorithmic complexity, cooperating systems, performance evaluation, and software correctness. This curriculum provides students with the skills needed to design, develop, evaluate, and analyze software solutions to a wide spectrum of computational problems and prepares them to be leaders in the rapidly changing field of computing throughout their careers.

Program Educational Objectives:

In particular, within a few years after graduation, graduates in computer science should be able to:

1. Apply appropriate theory, practices, and tools to the specification, design, implementation, maintenance and evaluation of both large and small software systems.
2. Work in teams to design, implement, and/or maintain components of computer software systems.
3. Stay current through professional conferences, certificate programs, post-baccalaureate degree programs, or other professional educational activities.

Program Outcomes (Student Outcomes):

- (a) An ability to analyze a problem, and to identify and define the computing requirements appropriate to its solution
- (b) An ability to design, implement, and evaluate a computer-based solution to meet a given set of computing requirements in the context of the discipline
- (c) An ability to communicate effectively with a range of audiences about technical information
- (d) An ability to make informed judgements in computer practice based on legal and ethical principles
- (e) An ability to function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables
- (f) An ability to apply theory in the design and implementation of computer-based solutions
- (g) An ability to reason about and explain computer-based solutions at multiple levels of abstraction

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CMPSC 122 or CMPSC 132, MATH 140 (GQ), MATH 141 (GQ), MATH 230 (GQ), PHYS 211 (GN), and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Computer Science, a minimum of 127 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 106-108 credits

(This includes 24 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (49-50 credits)

CMPE 331(3) [1], CMPSC 221(3) [1], CMPSC 311(3) [1], CMPSC 360(3) [1], CMPSC 461(3) [1], CMPSC 464(3), CMPSC 465(3) [1], CMPSC 473(3) [1], ENGL 202C GWS(3), MATH 140 GQ(4) [1], MATH 141 GQ(4) [1], MATH 220 GQ(2-3), PHYS 211 GN(4) [1], PHYS 212 GN(4) (Sem: 1-2)
MATH 230(4)

ADDITIONAL COURSES (35 credits)

Select 3 credits from: CMPSC 121 GQ(3) [1] or CMPSC 131(3) [1] (Sem: 1)

Select 3 credits from: CMPSC 122 GQ(3) [1] or CMPSC 132(3) [1] (Sem: 2)

Select 3 credits from: ENGL 15 GWS(3) or ENGL 137 GWS(3) (Sem: 1-2)

Select 1 credit of First-Year Seminar (Sem: 1-2)

Select 3 credits from: ENGL 138 GWS(3) or CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)

Select 3 credits from: STAT/MATH 318(3) or STAT/MATH 414(3) or STAT/MATH 418 (Sem: 3-4)

Select 4 credits from: CMPE 270(4) [1] or CMPE 271(3) [1] and CMPE 275(1) [1] (Sem: 4)

Select 6 credits from: CMPE 362(3), CMPE 431(3), CMPE 454(3), CMPSC 442(3), CMPSC 443(3), CMPSC 444(3), CMPSC 450(3), CMPSC 451(3), CMPSC 455(3), CMPSC 456(3), CMPSC 458(3), CMPSC 467(3), CMPSC 471(3), CMPSC 475(3), E E 456(3) (Sem: 7-8)

Select 3 credits from: STAT/MATH 319(3) or STAT/MATH 415(3) (Sem: 7-8)

Select 3 credits from any CMPE or CMPSC course numbered 400-489 (Sem: 7-8)

Select 3 credits from CMPSC 431(3), or CMPSC 483(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (22-23 credits)

Select 2-3 credits from PHYS 213 GN(2), PHYS 214 GN(2), or 3 credits from the approved list of natural sciences courses (Sem: 3-4)

Select 0-4 credits in a foreign language (second-semester proficiency) (Sem: 5-6)

Select 10-14 credits from department list (Students may apply up to 3 credits of ROTC as department list credits and 3 credits of ROTC as GHA credits) (Sem: 7-8)

Select 6 credits in non-CMPE or CMPSC courses numbered 400-489, in consultation with adviser (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2018

Blue Sheet Item #: 46-04-032

Review Date: 1/9/2018

Retention and Transfer: #240 8/20/2013

UCA Revision #2: 7/27/07

Communications

Altoona College (COMAL)

The curriculum of this B.A. in Communications provides a general grounding in traditional media forms along with work in the area of media convergence. Students must do coursework at both the practical and theoretical level. On the theory side, coursework will be offered in the areas of media criticism and theory, visual communications, and media history at the introductory and advanced levels. On the applied side, coursework will be offered in video and audio production, news writing and photojournalism, radio and television studio production, and public relations and advertising at the introductory and advanced levels. In the Convergent Media News Service courses, which form the most distinctive component of the program, students will actually produce and deliver a college news service in print, broadcasting (TV and streaming radio), and a multimedia online format. This hands-on experience will provide students an opportunity to create materials suitable for inclusion in a portfolio. Although not required, students will be strongly encouraged to do an internship sometime during their junior or senior years. Finally, the capstone Convergent Media Seminar will bring seniors together to consider the larger, theoretical issues related to the fast-paced changes in communications today and into the future. With a degree in this program, students will be well-positioned to go right into industry, where they will be able to compete in a number of different job markets, or to graduate school for advanced training.

For the B.A. in Communications, a minimum of 123 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in front of *Bulletin*)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES OR GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 12 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in front of *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 42 credits [\[1\]](#)

PRESCRIBED COURSES (12 credits)

COMM 100 GS(3), COMM 150 GA(3) (Sem: 1-3)

COMM 260W(3) (Sem: 2-3)

COMM 490(3) (Sem: 7-8)

ADDITIONAL COURSES (30 credits)

Select 12 credits from the following, including 6 credits at 400-level: COMM 001(1-3) [\[2\]](#), COMM 002(1-3) [\[2\]](#), COMM 215(3), COMM 241(3), COMM 242(3), COMM 251(3), COMM 269(3), COMM 270(3), COMM 282(3), COMM 296(1-6), COMM 337(3), COMM 338(3), COMM 339(3), COMM 346(3), COMM 360(3), COMM 374(3), COMM 415(3), COMM 421W(3), COMM 438(3 max:6), COMM 439(3 max:6), COMM 448(3), COMM 460(3), COMM 461(3), COMM 462(3), COMM 467(3), COMM 468(3), COMM 469(3), COMM 471(3) (Sem: 5-8)

COMM 436(3), COMM 472(3), COMM 481(3), COMM 495(1-9), COMM 496(1-18) (Sem: 7-8)

Select 12 credits from the following, including 6 credits at 400-level: COMM 110 GH(3), COMM 180 GS(3), COMM 190 GS(3), COMM 205 US(3), COMM 250 GA(3), COMM 251(3), COMM 261 GH(3), COMM 292 GH(3), COMM 294(1-3), COMM 296(1-6), COMM 320(3), COMM 370(3) (Sem: 3-6)

COMM 401(3), COMM 403(3), COMM 408(3), COMM 409(3), COMM 411(3), COMM 412(3), COMM 413W(3), COMM 454(3) (Sem: 5-8)

COMM 417(3), COMM 451(3), COMM 452(3), COMM 494(1-3), COMM 496(1-18) (Sem: 7-8)

Select 6 credits from COMM 470A(3), COMM 470B(3), COMM 470C(3)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[\[2\]](#) A student may apply only 6 credits total of COMM 001 and COMM 002 towards the requirements of the Communications degree.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-011

Review Date: 10/7/2014

[Comments](#)

AL

Communication

Penn State Erie, The Behrend College (COMBA)

The B.A. major in Communication offers a liberal arts background with emphasis in mass media studies and corporate communication. It prepares students for careers in corporate communication, print and broadcast journalism, multi-media and video production, and advertising/public relations by providing an interdisciplinary study of spoken, written, visual, and technically mediated messages.

For the B.A. degree in Communication, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(0-3 of these credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 9-21 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 45 credits
(This includes 0-3 of these credits of General Education courses: 0-3 credits of GA courses in the Journalism/Media Productions (Multimedia Area).)

PRESCRIBED COURSES (13 credits) [\[1\]](#)
CAS 303 GS(3), COMM 160(1), COMM 251(3) (Sem: 1-4)
CAS 204(3), COMM 315(3) (Sem: 5-6)

ADDITIONAL COURSES (17 credits) [\[1\]](#)
Select 3 credits from CAS 101N GS(3), CAS 175 GH(3), COMM 100 GS(3), COMM 110 GH(3), COMM 118 GS(3), COMM 150 GA(3), COMM 168 GH(3), or COMM 180 GS(3) (Sem: 1-2)
COMM 242(3); or COMM 270(3) (Sem: 1-4)
CAS 212(3); or CAS 252(3) (Sem: 5-6)
CAS 271 US;IL(3); or COMM 410 IL(3) (Sem: 5-8)
COMM 494(3); or COMM 495(3-6) (Sem: 7-8)
Select two credits from the following: COMM 001(1-3), COMM 002(1-3), COMM 003(1-3), or COMM 004(1-3) (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits) [\[1\]](#)
COMBA students are required to complete 15 credits of supporting coursework, from department approved list. Nine of these credits must be at the 400-level. In consultation with an academic advisor, students will select 6-9 credits from 2 of 3 Concentrations; 1. Communication Studies, 2. Strategic Communication, and 3. Journalism/Media Production. (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-013

Review Date: 10/7/2014

UCA Revision #2: 7/27/07

BD

Communications

University College (COMCC): Penn State Beaver, Penn State Brandywine, Penn State Greater Allegheny, Penn State New Kensington

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

With the rapid development of digital technologies over the last decade, the field of communications has seen unprecedented growth and convergence of medium in media both technologically and structurally. The communications degree program addresses strongly articulated employer requirements for the workplace through an integrated program model. The degree provides the basic theoretical foundations of the discipline, allows for appropriate branching outside the traditional curriculum, and permits a drawing from appropriate courses in the disciplines of information sciences and technology, communications, arts and sciences, English, and business.

The degree in communications provides two options for students who wish to develop their written and verbal skills in an effort to gain professional employment in fields such as public relations, publishing, speech writing, video and multimedia, production, and/or journalism.

CORPORATE COMMUNICATIONS OPTION: In extending traditional organizational communication, strategic communication, and public relations to the digital age, this option prepares students to compete in a global society. The program is also effective as preparation for e-commerce.

DIGITAL JOURNALISM OPTION: In today's workplace, journalism graduates are required to regularly engage rapidly converging media in their work. This option offers graduates a competitive advantage by complementing traditional options (newspaper, magazine, radio, TV) with convergent course work designed to prepare students for professional journalism in the digital age.

For a B.A. degree in Communications, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(6-16 credits of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 8-11 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 49-56 credits
(This includes 6-16 credits of General Education courses: 3-6 credits of GS; 3-6 credits of GH; 0-4 credits GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 22 credits

PRESCRIBED COURSES (13 credits)[\[1\]](#)

COMM 160(1) (Sem: 1-2)
COMM 260W(3), COMM 270(3) (Sem: 3-4)
COMM 494(3), COMM 495(3) (Sem: 7-8)

ADDITIONAL COURSES (9 credits)[\[1\]](#)

COMM 100 GS(3) or COMM 110 GH(3) (Sem: 1-2)
Select 3 credits. (May double count with general education courses.) CAS 202 GS(3), CAS 301 GH(3) (Sem: 3-4)
Select 3 credits from the following in Communications Research Methods/Theory (may not double count with option additional courses requirement): CAS 204(3), CAS 471 US;IL(3), COMM 304(3); COMM 428D(3) (Sem: 5-6)

REQUIREMENTS FOR THE OPTION: 27-34 credits

CORPORATE COMMUNICATIONS OPTION: (30-34 credits)

PRESCRIBED COURSES (6 credits)[\[1\]](#)

CAS 252(3) (Sem: 3-4)
COMM 403(3)

ADDITIONAL COURSES (24-28 credits)[\[1\]](#)

Choose one of the following two tracks:

PR/MARKETING TRACK:

COMM 370(3) (Sem: 5-6)
COMM 471(3) (Sem: 7-8)
ECON 102 GS(3); ECON 104 GS(3) (Sem: 2-3)
MKTG 301(3) (Sem: 5-6)

OR

STRATEGIC COMMUNICATION TRACK:

COMM 428A(3) (Sem: 5-6)
COMM 428C(3) (Sem: 7-8)
COMM 428E(3) (Sem: 7-8)

(Some courses in this category have prerequisites that are not required in the program. Credits applied may not double count with any other major or option requirements. Only 3 credits combined maximum or COMM 1, 2, 3 may apply. Only 3 credits maximum of COMM 297 may apply. Only 3 credits maximum of COMM 299 may apply. Only 3 additional credits of COMM 495 may apply. Courses from selected tracks (PR/MARKETING TRACK OR STRATEGIC COMMUNICATION TRACK) may not double count in this category. STAT 200 may double count as GQ. Courses may double count toward IL and US requirements.)

Select 15-16 credits from the following (at least 3 credits must be at the 400 level):

CAS 203 GS(3), CAS 206(3), CAS 222 GS;US;IL(3), CAS 271 US;IL(3), CAS 352(3), CAS 404(3), CAS 426(3), COMM 1(1-3), COMM 2(1-3), COMM 3(1-3), COMM 118 GS(3), COMM 205 US(3), COMM 215(3), COMM 241(3), COMM 251(3), COMM 282(3), COMM 292 GH(3), COMM 297(1-3), COMM 299 IL(1-3), COMM 320(3), COMM 370(3), COMM 407A(3), COMM 407B(3), COMM 407C(3), COMM 408(3), COMM 409(3), COMM 410 IL(3), COMM 411(3), COMM 412(3), COMM 413W(3), COMM 428A(3), COMM 428C(3), COMM 428D(3), COMM 462(3), COMM 468(3), COMM 471(3), COMM 473(3), COMM 476(3), COMM 495(3), COMM 496(3), ENGL 420(3), MKTG 301(3), STAT 200 GQ(4) (Sem: 5-8)

DIGITAL JOURNALISM OPTION: (27-28 credits)

PRESCRIBED COURSES (9 credits)[\[1\]](#)

COMM 403(3), COMM 409(3), COMM 460(3) (Sem: 5-8)

ADDITIONAL COURSES (18-19 credits)[\[1\]](#)

Take 3 Additional Credits in Professional Practices:
COMM 462(3); COMM 470A(3) (Sem: 7-8)

(Some courses in this category have prerequisites that are not required in the program. Credits applied may not double count with any other major or option requirements. Only 6 credits combined maximum of COMM 1, 2, 3, may apply. Only 6 credits maximum of COMM 297 may apply. Only 3 credits maximum of COMM 299 may apply. Only 3 additional credits of COMM 495 may apply. STAT 200 may double count as GQ. Courses may double count toward IL and US requirements.)

Select 15-16 credits from the following: CAS 203 GS(3), CAS 222 GS;US;IL(3), CAS 271 US;IL(3), CAS 404(3), COMM 1(1-3), COMM 2(1-3), COMM 3(1-3), COMM 118 GS(3), COMM 205 US(3), COMM 215(3), COMM 241(3), COMM 251(3), COMM 269(3), COMM 282(3), COMM 292 GH(3), COMM 297(1-3), COMM 299 IL(1-3), COMM 370(3), COMM 408(3), COMM 410 IL(3), COMM 411(3), COMM 412(3), COMM 413W(3), COMM 428A(3), COMM 428C, COMM 428D(3); COMM 428E(3); COMM 464(3), COMM 464W(3), COMM 467(3), COMM 468(3), COMM 470A(3); COMM 470B(3), COMM 470C(3), COMM 471(3), COMM 476(3), COMM 495(1-3), COMM 496(1-18), ENGL 420(3), STAT 200 GQ(4) (Sem: 3-8)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Reviewed by the Department: Spring Semester 2018

Blue Sheet Item #:46-04-066

Review Date: 1/9/2018

UCA Revision #1: 8/3/06

UC

Communications

Capital College (COMCL)

ASSOCIATE PROFESSOR CATHERINE McCORMICK, *Program Coordinator, Communications, School of Humanities*

Communications is an interdisciplinary program that combines practical, professional instruction with critical and cultural examinations of mass media. Our interdisciplinary and theoretical approach enables our students to understand the contextual relationships between contemporary media and ethics, history, drama, and art, as well as the mechanics of emerging information technologies. We feature small classes, a multidisciplinary faculty with real-world professional experience, high-technology laboratories, and an excellent location for media internships. This major prepares students for careers in areas such as public relations, journalism, graphic design, photography, new media, advertising, media production, and telecommunications. Because of our analytical approach, students can use the major to prepare for postgraduate studies.

Entry to Major Requirements:

Entry to the Communications major requires a 2.00 or higher cumulative grade-point average.

For a B.Hum. degree in Communications, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 13-15 credits

(These elective credits may be applied to a minor in consultation with an academic adviser. The number of elective credits needed varies depending on whether the student participates in an internship.)

BACHELOR OF HUMANITIES DEGREE REQUIREMENTS: 18 credits

(See description of Bachelor of Humanities Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 42-44 credits

At least 12 credits of Communications courses must be taken at the 400 level.

PRESCRIBED COURSES (6 credits)

COMM 251(3), COMM 456(3) (Sem: 5-8)

ADDITIONAL COURSES (18-20 credits)

COMM 230(3) or COMM 260W(3) (Sem: 3-8)

Select two courses (6-8 credits) in visual communication from the following: COMM 215(3), COMM 241(3), COMM 363(3), COMM 371(4), COMM 415(3), COMM 441(3), COMM 482(4) (Sem: 3-8)

Select 9 credits in Communications from the following: COMM 215(3), COMM 241(3), COMM 250(3), COMM 320(3), COMM 332(3), COMM 346(3), COMM 360(3), COMM 363(3), COMM 370(3), COMM 374(3), COMM 414(3), COMM 415(3), COMM 430(3), COMM 457(3), COMM 458(3), COMM 459(3), COMM 462(3), COMM 474(3), COMM 488(3), COMM 495(1-6) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 6 additional credits in Communications (Sem: 5-8)

Select 12 credits from the School of Humanities approved list in consultation with an academic adviser. These credits may be applied to a minor in support of the student's interests (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2007

Blue Sheet Item #: 35-07-130

Review Date: 6/12/07

CL

Computer Science

Capital College (COMP)

PROFESSOR THANG N. BUI, *Program Chair, School of Science, Engineering, and Technology*

This program is designed to prepare students for employment as computer scientists in engineering, scientific, industrial, and business environments as software developers, programmers, and systems analysts. While most students will enter the job market directly upon graduation, graduate school in computer science or related areas is also an option. Selection of electives can be tailored for students pursuing this path.

The Computer Science major provides a solid foundation in the areas of systems programming, algorithm design, artificial intelligence, and engineering large software systems using state-of-the-art methodologies and programming languages.

Students may expect to: develop a solid foundation in mathematical studies relevant to computer science; master skills in computer science; enjoy possibilities for internships and part-time employment with local companies; and become problem solvers. These goals are consistent with the goals outlined by the Association of Computing Machinery.

For a B.S. degree in Computer Science, a minimum of 120 credits is required.

Entry to Major Requirements:

Entry to the Computer Science major requires that the student has earned a C or better in the following courses: MATH 140 GQ(4), MATH 141 GQ(4), CMPSC 121(3), and CMPSC 122(3). A 2.00 or higher cumulative grade-point average is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2).

GENERAL EDUCATION: 45 credits

(13 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR.)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

Incoming first-year students are required to complete a course with the suffix S, T, or X, or the PSU abbreviation.

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 88 credits

(This includes 13 credits of General Education courses: 3 credits of GWS courses, 6 credits of GQ courses, and 4 credits in GN courses.)

PRESCRIBED COURSES (59 credits) [2]

MATH 140 GQ(4) [1], MATH 141 GQ(4) [1] (Sem: 1-2)

CMPSC 121 GQ(3) [1], PHYS 211 GN(4) (Sem: 2)

CMPSC 122(3) [1], CMPSC 360(3) [1] (Sem: 3)

CMPSC 221(3), CMPSC 312(3), MATH 220(2) (Sem: 4)

CMPSC 430(3), CMPSC 460(3), CMPSC 462(3), CMPSC 463(3), CMPSC 469(3), CMPSC 470(3), CMPSC 472(3), CMPSC 487(3), CMPSC 488(3), ENGL 202C GWS(3) (Sem: 5-8)

ADDITIONAL COURSES (18 credits)

MATH 318(3), STAT 301 GQ(3), or STAT 318(3) (Sem: 5-8)

Select 15 credits from the following (9 of which must have a CMPSC prefix): CMPSC 313(3), CMPSC 412(1.5), CMPSC 413(1.5), CMPSC 426(3), CMPSC 438(3), CMPSC 441(3), CMPSC 444(3), CMPSC 455(3), CMPSC 457(3), CMPSC 475(3), CMPSC 496(1-9), CMPSC 497(1-9), MATH 401(3), MATH 411(3), MATH 412(3), MATH 425(3), MATH 430(3), MATH 431(3), MATH 435(3), MATH 449(3), MATH 450(3), MATH 455(3), MATH 465(3), MATH 468(3), MATH 496(1-9), MATH 497(1-9) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (11 credits)

Select 6 credits of 300-400 level courses in consultation with an academic adviser and in support of the student's interests. (Sem: 5-8)

Select 5 credits of 100-400 level courses (Sem: 5-8)

Integrated B.S./M.S. Program in Computer Science

The Computer Science program offers a limited number of academically superior Bachelor of Science candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science and the Master of Science in Computer Science. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to earn the two degrees in five years.

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science and Master of Science degrees. However, the total course load is reduced due to the maximum of 12 credits that can count towards both degrees. A minimum of 6 credits proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program. The third and fourth years of the IUG program differ from those of the Bachelor of Science program due to the courses that count toward the Master of Science degree requirements. Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the student has completed 100 to 105 credits, which is at the end of the first semester of the senior year for a typical student in the program.

Students who have not maintained a 3.5 GPA in their Math and Computer Science courses will be put on probationary status with respect to the IUG program. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year. As part of the review in the senior year, students will be advised about the paper option and thesis option in the graduate program. Students intending to pursue the thesis option would be advised to do so only if they have been doing very well in the program and are in no danger of not being able to continue into the fifth year. A minimum grade point average of 3.5 must be earned in all math and computer science course work that is applied toward the graduate degree. This includes any courses that count toward both the undergraduate and graduate degrees, as well as all courses taken during the fifth year.

Students have the choice of receiving the B.S. degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years. Note that students who are awarded a graduate assistantship must elect to receive the B.S. degree at the end of the fourth year. If for any reason a student admitted to the IUG program is unable to complete the requirements for the Master of Science degree, the student will be permitted to receive the Bachelor of Science degree assuming all the undergraduate degree requirements have been satisfactorily completed. Students who successfully complete the courses listed in the recommended schedule will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

Admission Requirements

To initiate the application process, students must submit an Integrated Undergraduate-Graduate (IUG) Degree in Computer Science Application Form, a transcript, and a faculty recommendation, in addition to applying for admission to the Graduate School. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. In order to apply for the IUG program, students must have completed a minimum of 45 credits. A typical student would apply after completing between 45 to 60 credits, that is, after the fourth semester and before the end of the fifth semester. For consideration for acceptance into the program, students must have completed and earned a minimum grade point average of 3.0 in the following Computer Science and Mathematics courses: MATH 140, MATH 141, MATH 220, CMPSC 121, CMPSC 122, and CMPSC 360. Student applications will be evaluated based on their overall academic performance, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Computer Science.

Degree Requirements

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science and Master of Science degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. The minimum of 6 credits double-counted must be at the 500 level. Thesis credits may not be double counted.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] Students must earn a 2.5 or higher grade point average in the following courses: CMPSC 221, CMPSC 312, CMPSC 360, CMPSC 430, CMPSC 460, CMPSC 462, CMPSC 463, CMPSC 469, CMPSC 470, CMPSC 472, CMPSC 487, and CMPSC 488.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-032

Review Date: 04/09/2013

Retention and Transfer # 236 updated 5/22/13

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

CL

Criminal Justice

*Capital College (CRIMJ): Penn State Harrisburg
World Campus*

PROFESSOR SHAUN GABBIDON, *Program Chair, School of Public Affairs*

The Bachelor of Science degree program in Criminal Justice helps provide its graduates with the communications and analytical skills critical to succeed in criminal justice and related careers. Through an interdisciplinary approach to the problems of crime and society, the program also equips students to pursue graduate study in criminal justice or related disciplines, and educates students to become effective problem-solvers as professionals in the field of criminal justice.

The study of criminal justice is approached as an applied interdisciplinary science, teaching students both the theoretical and the practical aspects of crime control and the administration of justice. The Criminal Justice curriculum provides students with the opportunity and assistance to acquire knowledge of the roles of policing, courts, laws, and corrections as they relate to both the adult and juvenile justice system. Students also gain knowledge of the history, concepts, and critical issues related to the role of gender and race/ethnicity in the criminal justice system, victimology, and ethics in criminal justice. The curriculum further provides a theoretical foundation of the discipline, combined with a thorough understanding of the scientific method as it applies to criminal justice. This combination is expected to sharpen the students' talents of reasoning and judgment, qualities imperative to rational functioning in criminal justice and related professions.

For a B.S. degree in Criminal Justice, a minimum of 120 credits is required.(12 double-counted with the M.A. Requirement.)

Admission Requirements for Transfer Students:

Transfer applicants must have at least a 2.0 cumulative grade-point average (4.0 scale). The evaluation of prior college work is conducted on an individual basis by the Office of Enrollment Services at both campuses.

Entry to Major Requirements:

The student must have a 2.00 cumulative grade-point average and an average of C (2.00) or better in any course already taken in the major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 13-17 credits

REQUIREMENTS FOR THE MAJOR: 62 credits

(This includes 0-4 credits of General Education courses: 0-4 credits of GQ courses.)

PRESCRIBED COURSES (25 credits)^[1]

CRIMJ 12 GS(3), CRIMJ 100 GS(3), CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3), CRIMJ 250(3), CRIMJ 450(4), CRIMJ 465(3) (Sem: 5-8)

(At least 9 credits in Additional Courses and/or Supporting Courses must be at the 400 level.)

ADDITIONAL COURSES (16 credits)

Select 4 credits from CRIMJ 260 GQ(3) or STAT 200 GQ(4) (Sem: 5-8)

Select 6 credits from the following: CRIMJ 201(3), CRIMJ 220(3), CRIMJ 221(3), CRIMJ 234(3), CRIMJ 241(3) (Sem: 5-8)

Select 6 credits from the following: CRIMJ 300(3-6), CRIMJ 301(3-6), CRIMJ 304(3), CRIMJ 389(3), CRIMJ 406(3), CRIMJ 407 US(3), CRIMJ 408(3), CRIMJ 410(3), CRIMJ 413(3), CRIMJ 414(3), CRIMJ 415(3), CRIMJ 421(3), CRIMJ 423 US(3), CRIMJ 425(3), CRIMJ 426(3-6), CRIMJ 430(3), CRIMJ 431(3), CRIMJ 441 US(3), CRIMJ 453 US(3), CRIMJ 460(3), CRIMJ 462(3), CRIMJ 489(3), CRIMJ 495(3-12), CRIMJ 496(1-18), CRIMJ 497(1-9) (Sem: 5-8)

Or Select 12 credits from the following: CRIMJ 300(3-6), CRIMJ 301(3-6), CRIMJ 304(3), CRIMJ 389(3), CRIMJ 406(3), CRIMJ 407 US(3), CRIMJ 408(3), CRIMJ 410(3), CRIMJ 413(3), CRIMJ 414(3), CRIMJ 415(3), CRIMJ 421(3), CRIMJ 423 US(3), CRIMJ 425(3), CRIMJ 426(3-6), CRIMJ 430(3), CRIMJ 431(3), CRIMJ 441 US(3), CRIMJ 453 US(3), CRIMJ 460(3), CRIMJ 462(3), CRIMJ 489(3), CRIMJ 495(3-12), CRIMJ 496(1-18), CRIMJ 497(1-9) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 6 credits: 3 credits at the 200 level and 3 credits at the 300 and 400 level or 6 credits at the 300 and 400 level from the following: AFRAS, BESC, PLSC, PUBPL, PSYCH, SOC (Sem: 5-8)

Select 15 credits in consultation with an academic adviser and in support of the student's interests. For information about specific courses in this area, contact the School of Public Affairs. (Sem: 5-8)

Integrated B.S./M.A. in Criminal Justice

The Criminal Justice Program offers an integrated B.S./M.A. program that is designed to allow academically superior baccalaureate students enrolled in the Criminal Justice major to obtain both the B.S. and the M.A. degrees in Criminal Justice within five years of study. The first two years of undergraduate coursework typically include the University General Education requirements and lower-level courses. In the third year, students typically take upper-division coursework in Criminal Justice and define areas of interest. The fourth year involves graduate-level Criminal Justice coursework including required courses in Criminal Justice Theory and Policy (CRIMJ 500; CRIMJ 502). The fifth and final year of the program typically consists of graduate coursework in Criminal Justice including Advanced Research Methods and Statistics in Criminal Justice (CRIMJ 501; CRIMJ 503) and identification of an original research project that will culminate in the completion of a thesis (CRIMJ 600) or master's paper (CRIMJ 594).

If students accepted into the IUG program are unable to complete the M.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

Admission Requirements

The number of openings in the integrated B.S./M.A. program is limited. Admission is selective based on specific criteria and the unqualified recommendation of faculty. Applicants to the integrated program:

1. Must be enrolled in the B.S. program in Criminal Justice and meet the admission requirements of the Criminal Justice M.A. program at Harrisburg.
2. Must apply to the program via the [Graduate School application for admission](#), and must meet the [admission requirements of the Graduate School](#).
3. Shall be admitted no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study.
4. Must submit transcript(s) of undergraduate work taken outside of Penn State, recommendations from two faculty members, writing sample, and statement of goals.
5. Must have an overall GPA at or above 3.0 (on a 4.0 scale) in undergraduate coursework and a GPA at or above 3.25 in all coursework completed for their major.
6. Must present a plan of study approved by the student's adviser in the application process. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program.

Degree Requirements

Students must fulfill all requirements for each degree in order to be awarded that degree, subject to the double-counting of credits as outlined below. Degree requirements for the B.S. in Criminal Justice are listed in the Undergraduate Bulletin. Degree requirements for the M.A. degree are listed in the Degree Requirements section above. Up to 12 credits may be double-counted towards the degree requirements for both the graduate and undergraduate degrees; a minimum of 50% of the double-counted courses must be at the 500 or 800 level. Credits associated with the culminating experience for the graduate degree cannot be double-counted. The courses that are eligible to double count for both degrees are: CRIMJ 450W, CRIMJ 465, CRIMJ 500, CRIMJ 501, CRIMJ 502, and CRIMJ 504.

Students must sequence their courses so all undergraduate degree requirements are fulfilled before taking courses to count towards the graduate degree. If students accepted into the IUG program are unable to complete the M.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2018

Blue Sheet Item #: 46-04-018

Review Date: 01/9/2018

UCA Revision #1: 8/20/06

UCA Revision #2: 7/27/07

Communication Sciences and Disorders

University Park, College of Health and Human Development (CSD)

PROFESSOR DIANE L. WILLIAMS, *Head of the Department*

This major offers a comprehensive program of study for preparing students who want to become speech-language pathologists or audiologists. The curriculum is specifically designed for the sole purpose of preparing undergraduate students for graduate study in communication sciences and disorders or related areas. This occurs because state licensure laws and professional certifications require that a speech-language pathologist or audiologist must have a master's degree, pass a national test, and complete a clinical fellowship year.

Overall, the curriculum enables students to develop fundamental knowledge based on scientific principles, skills, and attitudes required for habilitating and rehabilitating persons of all ages with a wide range of speech, language, and hearing problems. Further, the curriculum allows students an opportunity to explore all aspects of communication sciences and disorders as well as elect courses of special interest.

The first two years of study emphasize general education and background study. The last two years of study emphasize normal and disordered aspects of speech, language, and hearing as well as professional management, concerns, and obligations. Clinical observation and diversity focused course work are included in the curriculum.

For the B.S. degree in Communication Sciences and Disorders, a minimum of 120 credits is required. (To satisfy graduation requirements, students must have completed 6 credits from courses offered in the college and outside the department in which the major is offered.)

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. CSD requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6-10 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 27-30 credits

REQUIREMENTS FOR THE MAJOR: 54-55 credits

(This includes 6 -10 credits of General Education courses: 3-6 credits of GS courses; 3-4 credits of GQ courses.)

PRESCRIBED COURSES (42 credits)

CSD 146 US;IL(3) [\[1\]](#), CSD 230(3) [\[1\]](#), CSD 269 US;IL(3) [\[1\]](#), PSYCH 100 GS(3) (Sem: 1-4)

CSD 300 US;IL(3) [\[1\]](#), CSD 341(3) [\[1\]](#), CSD 311(3) [\[1\]](#), CSD 331(3) [\[1\]](#) (Sem: 3-6)

CSD 433(3) [\[1\]](#), CSD 442(3) [\[1\]](#), CSD 444(3) [\[1\]](#), CSD 451(3) [\[1\]](#), CSD 459(3) [\[1\]](#), CSD 462 US;IL(3) [\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (12-13 credits)

Select 3 credits from EDPSY 014(3) or PSYCH 261 GS(3) (Sem: 1-4)

Select 3 credits from HDFS 129 GS(3) or PSYCH 212 GS(3) (Sem: 1-4)

Select 3-4 credits from EDPSY 101 GQ(3), PSYCH 200 GQ(4), or STAT 200 GQ(4) (Sem: 3-4)

Select 3 credits from HDFS 229 GS(3), HDFS 249 GS(3), HDFS 315 US(3), HDFS 411(3), HDFS 418(3), HDFS 432(3), PSYCH 270(3), or PSYCH 471(3) (Sem: 3-6)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-03-077

Review Date: 11/19/2013

UCA Revision #1: 8/20/06

HH

Creative Writing

Penn State Erie, The Behrend College (CWRIT)

The major allows students to develop their writing skills through craft classes, literature classes, and writing workshops, in preparation for a variety of post-graduation options, from continuing on to M.F.A. degree programs to working in the professional fields of publishing, editing and education. The program recognizes students must understand the relationship between tradition and individual talent, and provides a required sequence of literature courses designed to give students an overview of the historical literary traditions, especially modern and contemporary prose and poetry. It also provides options for sequences of writing workshops, requires a course in creative writing theory, and requires a course that fosters professional development and features live reading by visiting authors. The program culminates in a capstone experience, the senior thesis, a collection of poetry or prose of publishable quality that includes a critical preface demonstrating the students' ability to analyze and contextually their own writing.

For the B.F.A. degree in Creative Writing, a minimum of 121 credits is required. A student enrolled in this major must earn at least a grade of C in each 300- and 400-level course.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 76 credits

PRESCRIBED COURSES (46 credits)

CMLIT 010 GH;IL(3) [\[1\]](#), ENGL 006(1-8)*, ENGL 100(3) [\[1\]](#), ENGL 200(3) [\[1\]](#), ENGL 212(3) [\[1\]](#), ENGL 213(3) [\[1\]](#) (Sem: 1-4)

ENGL 312(3) [\[1\]](#), ENGL 433(3) [\[1\]](#) (Sem: 4-6)

ENGL 420(3) [\[1\]](#), ENGL 436(3) [\[1\]](#), ENGL 437(3) [\[1\]](#), ENGL 458(3) [\[1\]](#) (Sem: 5-8)

ENGL 401W(3) [\[1\]](#), ENGL 494(6) [\[1\]](#) (Sem: 7-8)

*Students planning to major in creative writing should enroll in this course every semester (typically 8 semesters). A student is required to take this course a minimum of four times.

ADDITIONAL COURSES (24 credits)

Select 12 credits of a Foreign Language (0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.) (Sem:1-4)

ENGL 443(3) [\[1\]](#) or ENGL 444(3) [\[1\]](#) (Sem: 4-8)

Select 9 credits from of the following: ENGL 412(3) [\[1\]](#), ENGL 413(3) [\[1\]](#), ENGL 422(3) [\[1\]](#), ENGL 423(3) [\[1\]](#) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from courses at the 200-level or above in CMLIT or ENGL [\[1\]](#) (Sem: 1-8)

In addition to the requirements above, for enrichment, students in the B.F.A. degree program have the opportunity of taking ENGL 209, Literary Magazine Practicum, and serving as genre editors or assistant editors on the staff of *Lake Effect*, the national literary journal published by the School of Humanities and Social Sciences at Penn State Erie, The Behrend College. This is a 1-credit course in which students may enroll for up to 8 credits over their time in the degree program.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-04-037

Review Date: 01/13/2015

BD

Cybersecurity Analytics and Operations

University Park, College of Information Sciences and Technology (CYAOP_BS)
Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies

PROFESSOR PENG LIU, Information Sciences and Technology
PROFESSOR CHAO-HSIEN CHU, Information Sciences and Technology

The Bachelor of Science in Cybersecurity Analytics and Operations in the College of Information Sciences and Technology (IST) is an interdisciplinary program that prepares students for careers as cybersecurity professionals. It educates students on the essential concepts of cyber-defense and the analytical fundamentals of cybersecurity, with a focus on the analytical and risk management underpinnings and associated cyber-defense techniques and strategies for ensuring the safety of online information stored in large and heterogeneous networks that are embedded within and across the complex socio-technical infrastructures that are pervasive in today's business, government and military organizations. Students will acquire the knowledge and skills needed to critically assess and respond to modern information security threats, using approaches that are grounded in a holistic understanding of adversarial strategies and effective responses. More specifically, it will offer an in-depth and domain-independent approach to the development of skills in cyberdefense technologies, tools and processes; cybersecurity analytics and visualization; and cybersecurity risk analysis and management. The major draws from concepts and skills associated with a number of disciplines, including information science, management science, statistics and data science, human behavior, and law/policy. Graduates will be prepared to join the rapidly growing cybersecurity workforce deployed across organizations of diverse sizes and missions.

Entrance Requirements: To be eligible for the Cybersecurity Analytics and Operations major, students must:

1. Have completed the following entrance-to-major requirements with a grade of C or better in each: CYBER 100S(3), IST 140(3), IST 210(3), IST 220(3), IST 242(3), STAT 200(4)
2. Have achieved a minimum cumulative grade point average of 2.00 prior to and through the end of the semester during which the entrance to major is requested.

For the B.S. degree in Cybersecurity Analytics and Operations, a minimum of 126 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(21 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in General Education Requirements)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 3 credits

REQUIREMENTS FOR THE MAJOR: 99 credits
(This includes 21 credits of General Education courses: 6 credits of GQ courses, 6 credits of GS courses, 9 credits of GWS courses.)

PRESCRIBED COURSES (81 credits)
CAS 100 GWS(3), CYBER 100S(3)[1], CYBER 262 (3)[1], IST 140 (3)[1], IST 210 (3)[1], IST 220 (3)[1], IST 230 (3)[1], IST 242 (3)[1], IST 261 (3)[1], MATH 110 GQ(4)[1], SRA 111 GS(3)[1], SRA 211 (3)[1], SRA 221 (3)[1], STAT 200 GQ(4)[1](Sem: 1-4)
CYBER 342W(3)[1], CYBER 362 (3)[1], CYBER 366 (3)[1], IST 451 (3)[1], IST 454 (3)[1], IST 495 (1)[1], SRA 231 (3)[1], SRA 311 (3)[1], SRA 365 (3)[1](Sem: 3-6)
CYBER 440 (3)[1], IST 432(3)[1], IST 456 (3)[1], SRA 472(3)[1] (Sem: 7-8)

ADDITIONAL COURSES (6 credits)
Select 3 credits from: ENGL 15 GWS(3); ENGL 30 GWS(3) (Sem: 1-4)
Select 3 credits from: ENGL 202C GWS(3); ENGL 202D GWS(3) (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 12 credits from one of the Application Focus course lists in Appendix B; at least 6 credits must be at the 400-level. Students may also complete a custom Application Focus sequence with approval from an academic advisor and a CYBER teaching faculty member. (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by Department: Fall 2017

Blue Sheet Item #: 46-02-037

Review Date: 10/3/2017

Dance

College of Arts and Architecture (DANCE_BS)

ASSOCIATE Professor of Theater, Elisha Halpin

The BS in Dance degree is specially designed as a comprehensive study of all elements of Dance, focusing on elements of the artistry and sciences of the body serve to create a more well rounded performer. Students are encouraged to have a concurrent major with any other area of study. Students are encouraged to consider how their concurrent majors will result in career enhancement, for example kinesiology and dance or education and dance. Students will learn to analyze, generate, and influence creativity in their workplaces and their lives. This program will also emphasize the broadening impact of the intersection of the arts and sciences. Students are strongly encouraged to spend Maymester abroad in the dance program's international trip to Ireland.

Unlike the BFAs in Musical Theatre, Design and Technology, and Acting, this degree is designed to allow and encourage exploration by the student, working closely with their adviser. As a student's perspectives and career goals may change over the course of their four years at Penn State, this program is flexible in order to support those changes. Equally, unlike the BA in Theatre, which is a liberal arts based program, the BS focuses on courses that enhance the student's professional aspirations and encourage students to see the "theatricality of the body," the artistic applications of scientific information on the body, and the scientific aspect of artistry. Students who successfully complete the program will be prepared to use their skills in presentation, design, analysis, and critical thinking in every phase of their profession development.

ENTRANCE REQUIREMENTS: Entrance to the major is achieved by audition and interview with the dance faculty. Video auditions and internet interviews can be arranged.

For the Bachelor of Science in Dance a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing Given Like (sem: 1-2)

GENERAL EDUCATION: 45 credits

(7.5-13.5 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 9-15 credits

REQUIREMENTS FOR THE MAJOR: 73.5 credits [1]

(This includes 7.5-13.5 credits of General Education courses: 3 credits of GN; 1.5 credits of GHA; 0-6 credits of GA; 3 credits of GS. College of Arts and Architecture - 6 credits of History of the Arts. At least 15 credits at the 400 level.)

PRESCRIBED COURSES (31.5 credits)

BBH 203/PSYCH 260(3), BIOL 11 GN(3), THEA 407(3), DANCE 370 GN(3), DANCE 410 US;IL(3), KINES 180(3), KINES 202(4), PSYCH 100 GS(3), THEA 1S(1), NUTR 100 GHW(1.5), THEA 289 (1), THEA 132(3)

ADDITIONAL COURSES (27 credits)

Select 18 credits from: DANCE 100 GA;US;IL(3); THEA 100 GA;US;IL(3) or THEA 105 GA(3); THEA 102 GA(3); THEA 120(3); DANCE 411 GH(3); THEA 408 US(3); DANCE 499 IL(1); THEA 499 IL(9)

Take 9 credits of DANCE or THEA courses, 6 credits must be 400 level: DANCE 280(1); DANCE 221(2); DANCE 297(1); DANCE 381(1); DANCE 480(2); DANCE 472(3); DANCE 485(1-2); DANCE 497(1); THEA 146(2)

SUPPORTING COURSE AND RELATED AREAS (15 credits)

Select 15 credits of dance technique courses in consultation with adviser.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-013E

Review Date: 1/10/2017

Data Sciences

University Park, College of Engineering (DATSC)
University Park, College of Information Sciences and Technology (DATSC)
University Park, Eberly College of Science (DATSC)

Mary Beth Rosson, Associate Dean, Information Sciences and Technology; Chita Das, Department Head, Computer Science and Engineering, College of Engineering

Not all options are available at all Colleges. Contact the College you are interested in entering to determine which options are offered.

The inter-college Data Sciences major will educate students on the technical fundamentals of data sciences, with a focus on developing the knowledge and skills needed to manage and analyze large scale unstructured data to address an expanding range of problems in industry, government, and academia. The underlying knowledge for data sciences derives from machine learning, data mining, computer science, statistics, and visualization, and the emerging science of managing and analyzing data at scale. Students will gain breadth of knowledge through common core classes, as well as depth in one of three options. After taking common courses during the pre-major stage, students will choose among options focused on application (College of IST), computation (College of Engineering) and science (College of Science). Students in all three options will come together in their junior and senior years for two shared capstone experiences. In combination the three options position Penn State to offer highly trained professionals who understand data science's multiple dimensions for a growing segment of the U.S. economy.

Applied Data Sciences - This option focuses on the principles, methods, and tools for assembly, validation, organization, analysis, visualization, and interpretation of large and heterogeneous data, to support data-driven discovery and decision making, with emphasis on addressing pressing scientific, organizational, and societal challenges. A combination of required and elective courses provides students with the training and skills needed to develop advanced tools and domain-specific analyses that yield actionable knowledge from data. This option also provides critical analytical skills needed to assess the benefits and limitations of data analytics across a broad range of applications.

Computational Data Sciences - This option focuses on the computational foundations of the data sciences, including the design, implementation and analysis of software that manages the volume, heterogeneity and dynamic characteristics of large data sets and that leverages the computational power of multicore hardware. Students in this option will take upper-level courses in computer science and related fields to develop the skills necessary to construct efficient solutions to computational problems involving Big Data.

Statistical Modeling Data Sciences - This option focuses on statistical models and methods that are needed to discover and validate patterns in Big Data. Students in this option will take upper-level statistics and mathematics courses, learning to apply the theoretical machinery of quantitative models to the solution of real-world problems involving Big Data.

Entrance Requirements

To be eligible for entrance into the Data Sciences major, a degree candidate must be enrolled in the College of Information Sciences and Technology, the College of Engineering, the Eberly College of Science, or the Division of Undergraduate Studies and satisfy requirements for entrance to the major.

Specific entrance requirements include:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin.
2. The degree candidate must complete the following entrance-to-major requirements: MATH 140 GQ (4) [1]; MATH 141 GQ (1) [1]; CMPSC 121 (3) [1]; CMPSC 122 (3); STAT 200 (GQ) (4)[1]; IST 210 (3)[1]. These courses must be completed by the end of the semester during which the entrance to major process is carried out.

For the B.S. degree in Data Sciences, a minimum of 125 credits is required (at least 18 credits must be taken at the 400 level).

GENERAL EDUCATION: 45 credits
(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 5-18 credits

REQUIREMENTS FOR THE MAJOR: 77-90 credits
(This includes 15 credits of General Education courses: 9 credits of GWS and 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 50 credits

PRESCRIBED COURSES (41 credits)
CMPSC 121 GQ(3)[1], CMPSC 122(3)[1], DS 220(3)[1], DS 300(3)[1], DS 340W(3)[1], DS 440(3)[1], ENGL 202C GWS(3), IST 210(3)[1], MATH 140 GQ(4)[1], MATH 141 GQ(4)[1], MATH 220 GQ(2)[1], STAT 200 GQ(4)[1], STAT 380(3)[1]

ADDITIONAL COURSES (9 credits)
CAS 100 GWS(3), ENGL 015 GWS(3); ENGL 137H/CAS 137H GWS(3), ENGL 138T/CAS 138T GWS(3) (Sem: 1-6)
STAT 318/MATH 318(3)[1]; STAT 414/MATH 414(3)[1] (Sem: 3-4)

REQUIREMENTS FOR THE OPTION: 27-40

APPLIED DATA SCIENCES: 40 credits

PRESCRIBED COURSES (22 credits)
IST 110 GS(3)[1], IST 230(3)[1], DS 200(3)[1], DS 310(3)[1], DS 320(3)[1], DS 330(3)[1], DS 410(3)[1], IST 495(1)[1] (Sem: 5-6)

ADDITIONAL COURSES (6 credits)
SRA 231(3); IST 442 IL(3); SODA 308(3); IST 445(3) (Sem: 5-8)
IST 337(3); IST 441(3); DS 402(3); IST 462(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 6 credits from Applied Option List A (Sem: 5-8)
Select 6 credits from Applied Option List B (Sem: 5-8)
(Students may apply up to 3 credits of ROTC as option list credits and 3 credits of ROTC as GHA credits)

COMPUTATIONAL DATA SCIENCES: 38 credits

PRESCRIBED COURSES (25 credits)
MATH 230(4)[1], CMPSC 360(3)[1], CMPSC 448(3), CMPSC 465(3)[1], STAT 415/MATH 415(3)[1], CMPSC 461(3), DS 410(3)[1], CMPSC 442(3)

ADDITIONAL COURSES (1 credit)
1 credit of First-Year Seminar (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 6 credits from Option List A courses
Select 6 credits from Option List B courses
(Students may apply up to 3 credits of ROTC as option list credits and 3 credits of ROTC as GHA credits)

STATISTICAL MODELING DATA SCIENCES: 27 credits

PRESCRIBED COURSES (11 credits)

MATH 230(4), STAT 184(1), STAT 440(3), STAT 462(3)

ADDITIONAL COURSES (4 credits)

MATH 311W(3)[\[1\]](#); CMPSC 360(3)[\[1\]](#) (Sem: 5-8)

1 credit of First-Year Seminar (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 6 credits from Quantitative Modeling Option List A courses

Select 6 credits from Quantitative Modeling Option List B courses

(Students may apply up to 3 credits of ROTC as option list credits and 3 credits of ROTC as GHA credits)

[List of Applied Data Sciences Option Courses](#)

[List of Computational Data Sciences Courses](#)

[List of Statistical Modeling Data Sciences Courses](#)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-02-038

Review Date: 10/13/2015

Digital Journalism and Media

University Park, Communications - James Risley, jfr4@psu.edu; Shannon Kennan, ssk168@psu.edu (DGJRM_BA)

The Digital Journalism and Media degree, to be offered via the World Campus, will prepare students for the fast-changing field of digital journalism and other web-based communications careers, including multimedia storytelling, digital production and digital media management. This new major, as structured, requires courses on writing, law, ethics and multimedia skills in its core. There are three suggested pathways of courses which can allow students to develop expertise in certain subject areas within mass communications: Digital Journalism, Visual Media and Media Management. They will understand the industries that operate in today's societies and be prepared for jobs as writers, content producers, leaders and policy makers.

The program will be accredited by the Accrediting Council on Education in Journalism and Mass Communications.

For the B.A. degree in Digital Journalism and Media a minimum of 120 credits are required.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 17-28 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 34 credits [\[1\]](#)

PRESCRIBED COURSES (16 credits)

COMM 160(1), COMM 271(3), COMM 280(3), COMM 403(3), COMM 409(3), COMM 428A(3) (Sem: 1-15)

ADDITIONAL COURSES (6 credits)

COMM 100 GS(3) or COMM 180 GS(3)

COMM 230 WAC(3) or COMM 260 WAC (3)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

COMM 180(3), COMM 215(3), COMM 269(3), COMM 270(3), COMM 310(3), COMM 337(3), COMM 342(3), COMM 346(3), COMM 380(3), COMM 428B(3), COMM 460(3), COMM 467(3), COMM 469(3), COMM 475(3), COMM 481(3), COMM 487(3), COMM 492(3), COMM 493(3)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring 2017

Blue Sheet Item #: 45-06-017

Review Date: 4/4/2017

Digital Media, Arts, and Technology

Penn State Erie, The Behrend College (DIGIT)

Sharon Dale, *in-charge*

Digital technology has transformed the way we live, interact, learn, and work. The interdisciplinary Digital Media, Arts, and Technology (DIGIT) major is designed for students who are curious about and want to explore the growing significance of technology in the modern world. DIGIT combines historical and theoretical course work with intensive practical training in the creation and use of digital media tools and computational systems. Foundational DIGIT courses familiarize students with the key concepts, methods, history, theories and practices of Digital Liberal Arts while a range of competency courses introduce them to industry-standard software applications alongside cutting edge tools that continue to emerge from the open source community. Combining the broad perspective of liberal arts training with in-demand technical skills, DIGIT incorporates either a capstone project or a digital media internship, in order to provide students with a successful transition from college to an increasingly technological job market.

Entrance Requirement: Students must earn C or better in ENGL 015 or ENGL 030 and COMM 270 to be eligible for entrance to the major.

For the B.A. degree in DIGIT a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6-12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of Bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 8-15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.) (See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: (48-49 credits)

(This includes 6-12 credits of General Education courses: 6 credits of GA courses for all categories; 0-4 credits of GQ courses for Data Visualization and Assessment category; 0-3 credits of GN courses for the Sound and Motion category; 0-6 credits of GS courses for the Modeling and Simulation/Human Computer Interaction category.)

PRESCRIBED COURSES: (21 credits)

ART 168 GA(3)[1], COMM 270(3), PHOTO 100 GA(3)[1] (Sem: 1-6)

DIGIT 100(3)[1] (Sem: 1-6)

DIGIT 110(3)[1], DIGIT 210(3)[1] (Sem: 2-6)

DIGIT 400(3)[1] (Sem: 3-6)

ADDITIONAL COURSES: (21-22 credits)

Select 3-4 credits from: CAS 426W(3)[1] or ENGL 211W(3)[1] or HIST 301(3)[1] or PSYCH 301(4)[1] or PL SC 480(3)[1] (Sem: 5-8)

Select 3 credits from: DIGIT 494(3)[1] or DIGIT 495(3)[1] (Sem: 7-8)

Select 9 credits from one of the following categories: (Sem: 4-8)

(May double count with general education courses)

(Some courses may require prerequisites)

Digital Humanities: ART 203(3), ENGL 050 GA(3), ENGL 229(3), ENGL 420(3)[1], GEOG 160 GS(3) and GEOG 161(1), GEOG 363(3)[1], HIST 490/LST 490(3)[1]

Sound and Motion: COMM 242(3), COMM 481(3)[1], GD 100 GA(3), INART 050 GN(3), INART 236 GA(3), INART 258A, GA(3), MUSIC 008 GA(3), MUSIC

458(3) [1]

Modeling & Simulation/Human Computer Interaction: CMPSC 102(3), CMPSC 302(3) [1], DIGIT 430(3)[1], MIS 387(3)[1], PSYCH 244 GS(3), PSYCH 253 GS(3), PSYCH 444(3) [1]

Data Visualization & Assessment: CMPSC 203 GQ(4), DIGIT 410(3)[1], MIS 204(3), MIS 336(3)[1], MIS 345(3)[1], MIS 430(3)[1]

Select 6 credits from a second category not used above (Sem: 4-8)

SUPPORTING COURSES (6 credits)

Select 6 credits (with at least three credits at the 400-level) from the following list or in consultation with advisor. (Sem: 4-8)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-024

Review Date: 04/14/2015

Digital Multimedia Design

University Park, College of Arts and Architecture via World Campus (DIGMD)

PROFESSOR GRAEME SULLIVAN, Professor in Charge

The Bachelor of Design (B.Des.) in Digital Multimedia Design (DMD) is an online undergraduate degree delivered in collaboration with the Colleges of Arts & Architecture, Communications, Information Sciences and Technology, and World Campus (WD). The major helps prepare individuals to be leaders in digital media technologies and multimedia industries. This interdisciplinary degree develops students' design thinking through courses in art and design, critical thinking through courses that promote active, critical and ethical use of communications media and technologies, and systems thinking through courses in information technology and human interaction.

The DMD will help individuals build capacities to be creative leaders and change agents who engage with critical issues through interconnected projects in design, technology, and communications across a wide spectrum of industries. This discipline integration creates the conditions for working in the collaborative, adaptive environments that characterize the digital media professions. Combining methods, tools, and approaches from each discipline provides the basis for developing design literacy, visual literacy and digital literacy when responding to problems and issues of local and global importance.

For the Bachelor of Design in Digital Multimedia Design a minimum of 120 credits are required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

FIRST-YEAR SEMINAR:

Included in General Education Requirements

UNITED STATES AND INTERNATIONAL CULTURES:

Included in General Education Requirements

WRITING ACROSS THE CURRICULUM:

Included in Requirements for the Major

REQUIREMENTS FOR THE MAJOR: 75 credits

PRESCRIBED COURSES (27 credits)[1]

ART 201(3), ART 211Y US(3), COMM 215(3), COMM 230(3), DMD 100(3), DMD 300(3), DMD 400(3), IST 140(3), IST 250(3)

ADDITIONAL COURSES (30 credits)

ART 010 GA(3); ART 020 GA(3); ART 122 US(3); ART 202(3); ART 203(3); ART 204(3); ART 302(3); ART 402(3); COMM 118 GS(3); COMM 180 GS(3); COMM 280(3); COMM 342(3); COMM 428A(3); COMM 428E(3); COMM 469(3); COMM 481(3); COMM 492(3); COMM 493(3); IST 242(3); IST 261(3); IST 311(3); IST 361(3); IST 413(3)

SUPPORTING COURSES (18 credits)

Select 6 credits of "history of art, design, technology and communications" in online coursework from World Campus offerings in consultation with an advisor.

Select 12 credits of related online coursework from World Campus in consultation with an advisor.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Blue Sheet Item #: 44-06-019

Review Date: 4/5/2016

Electrical Engineering

University Park, College of Engineering (E E)

PROFESSOR KULTEGIN AYDIN, *Head of the Department of Electrical Engineering*

Electrical Engineering (E E) is one of the broadest of all engineering majors and is much more than just building electrical circuits. Electrical engineering is the application of electronics, electrical science and technology, and computer systems to the needs of society. An electrical engineer is responsible for designing and integrating electronic/electrical systems in diverse industries such as defense, communications, transportation, manufacturing, health care, construction, and entertainment.

The mission of our undergraduate program is to provide a high-quality education in electrical engineering for our students and to instill in them the attitudes, values, and vision that will prepare them for lifetimes of success, continued learning, and leadership in their chosen careers. A combination of required and elective courses ensures that students acquire a broad knowledge base in electrical circuits, digital systems, electronic devices, electromagnetics, and linear systems, as well as expertise in one or more areas of specialization. Additional problem-solving skills and practical experience are developed through design projects and laboratory assignments, which also provide opportunities for developing team-building and technical communication skills.

Program Educational Objectives:

The BSEE Program provides undergraduates with a broad technical education important for employment in the private or public sector, and it teaches them the fundamentals, current issues, and creative problem solving skills essential for future years of learning. At three to five years after graduation, we foresee our graduates able to accomplish the following:

1. Electrical engineering practice in technical assignments such as design, product development, research, manufacturing, consulting, testing, sales, and management;
2. Participation and leadership on teams comprised of individuals with diverse professional and cultural backgrounds;
3. Continued learning and professional development through such activities as graduate school, distance education, professional training, and membership in professional societies.

Program Outcomes (Student Outcomes):

The BSEE Program Student Outcomes mirror those articulated by ABET:

- a. An ability to apply knowledge of mathematics, science, and engineering.
- b. An ability to design and conduct experiments, as well as to analyze and interpret data.
- c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- d. An ability to function on multidisciplinary teams.
- e. An ability to identify, formulate, and solve engineering problems.
- f. An understanding of professional and ethical responsibility.
- g. An ability to communicate effectively.
- h. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- i. A recognition of the need for, and an ability to engage in life-long learning.
- j. A knowledge of contemporary issues.
- k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

Admission to the Electrical Engineering major also requires that the applicant have a cumulative GPA of 2.6 or higher by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Electrical Engineering, a minimum of 130 credits is required. This baccalaureate program in Electrical Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 112-113 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (68 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), EDSGN 100(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#) (Sem: 1-2)
EE 200(3), EE 210(4) [\[1\]](#), EE 310(4) [\[1\]](#), MATH 220 GQ(2), MATH 230(4), MATH 250(3) [\[1\]](#), PHYS 213 GN(2), PHYS 214 GN(2) (Sem: 3-4)
EE 300(3), EE 330(4) [\[1\]](#), EE 340(4) [\[1\]](#), EE 350(4) [\[1\]](#) (Sem: 5-6)
EE 403(3), ENGL 202C GWS(3) (Sem: 7-8)

ADDITIONAL COURSES (20-21 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)
CMPSC 201 GQ(3) or CMPSC 121 GQ(3) (Sem: 1-2)
CMPEN 270(4) [\[1\]](#); or CMPEN 271(3) [\[1\]](#) and CMPEN 275(1) (Sem: 3-4)
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
ECON 102 GS(3) or ECON 104 GS(3) (Sem: 3-4)
Select 3-4 credits from IE 424(3), PHYS 410(3-4), STAT 401(3), STAT 414(3), or STAT 418(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

Select 6 credits from program-approved list of 300-level courses (Sem: 5-6)
Select 3 credits from program-approved lists of 300-level or 400-level courses (Sem: 5-6)
Select 6 credits from program-approved list of 400-level courses (Sem: 7-8)
Select 3 credits of engineering /science courses from a program-approved list (Sem: 7-8)
Select 6 additional credits, which may include up to 6 credits of ROTC, up to 6 co-op credits, and others from a program-approved list (Sem: 7-8)

Undergraduate Bulletin Archive – April, 2018

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[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-038

Review Date: 04/5/2016

R & T: Approved 5/24/2013 - Revised: 4/5/2016

UCA Revision #1: 8/16/06

UCA Revision #2: 7/27/07

EN

Electrical Engineering Technology

Capital College (E E T)
University College, Penn State Wilkes-Barre

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

AB SHAFAYE, *Program Chair, School of Science, Engineering, and Technology*

The Bachelor of Science graduate with a major in Electrical Engineering Technology (E E T) is an engineering technologist who can bridge the gap between scientific advancement and practical electrical devices and systems. Research in all fields of electrical engineering has produced an abundance of new knowledge in recent years. Many of these advanced scientific achievements have been unused due to the shortage of engineering technologists specifically educated to convert scientific information into practical devices and systems.

The E E T major helps equip students with the various skills necessary to adapt new scientific knowledge to new products. Technical selections are offered in the senior year to provide some degree of specialization, but all graduates receive a well-rounded basic education in electrical and electronic design principles. The strengths of the program include: an applied hands-on program; extensive laboratory experience; promising job placement; and accreditation by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone 410-347-7700, Web at www.abet.org.

E E T graduates who wish to continue their professional development can take the Fundamentals of Engineering examination in Pennsylvania, a prerequisite for taking the Professional Engineering examination.

For a B.S. degree in Electrical Engineering Technology, a minimum of 128 credits is required.

Admission Requirements for Transfer Students:

Applicants must have earned a high school diploma or equivalent and have attempted at least 18 semester credits at a regionally accredited college or university with at least a 2.0 cumulative grade-point average (4.0 scale). The evaluation of prior college work is done on an individual basis by the Office of Enrollment Services at Penn State Harrisburg.

Entry to Major Requirements:

Entry to the Electrical Engineering Technology major requires a 2.00 or higher cumulative grade-point average.

Re-enrollment:

Associate degree students should file a re-enrollment form during the final semester of their associate degree. Students re-enrolling from an associate's degree into the bachelor's degree should run a degree audit from LionPATH, using the E E T major code, to determine their curriculum requirements. Similar considerations apply to students changing majors from programs in science or engineering.

Students are directed to <http://www.psu.edu/bulletins/bluebook/gened/> for an explanation of the Penn State General Education requirements.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 5-16 credits

REQUIREMENTS FOR THE MAJOR: 85-96 credits

(This includes 18 credits of General Education courses: 3 credits of GWS courses; 9 credits of GN courses; 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 59-70 credits

PRESCRIBED COURSES (27 credits)

CHEM 110 GN(3), CHEM 111 GN(1), MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-6)
EET 312(4) [11](#), EET 331(4) [11](#), ENGL 202C GWS(3) (Sem: 5-6)
EET 419(1), EET 420(3) [11](#) (Sem: 7-8)

ADDITIONAL COURSES (32-43 credits)

Select 2*-3 credits from: EGT 101(1) and EGT 102(1) or EDSGN 100(3) (Sem: 1-2)

Select 3 credits from: CMPSC 101 GQ(3), CMPSC 121 GQ(3) or CMPSC 201 GQ(3) (Sem: 1-5)

Select 6*-8 credits from sequence a or b:

a.) PHYS 150 GN(3) and PHYS 151 GN(3) (Sem: 3-4)

b.) PHYS 211 GN(4) and PHYS 212 GN(4) (Sem: 1-4)

Select 3-4 credits from MATH 230(4), MATH 250(3), MATH 411(3), STAT 200 GQ(4) (Sem: 5-6)

Select 5-8* credits from course sequence a, b, or c:

a.) EET 114(4) and EET 311(4) [11](#) (Sem: 1-6)

b.) EE 210(4) [11](#) and EE 314(3) [11](#) (Sem: 3-6)

c.) EE 315(5) [11](#) (Sem: 5-6)

Select 4* credits from: CMPEN 271(3) and CMPEN 275(1) or CMPET 117(3) and CMPET 120(1) (Sem: 1-4)

Select 3*-4 credits from: CMPEH 472(4) or CMPET 211(3) (Sem: 3-6)

Select 3*-4 credits from: EET 205(1) and EET 210(2) or EE 310(4) (Sem: 3-6)

Select 3-5* credits from: EET 213(5) or EE 485(3) (Sem: 3-6)

*Courses required by PSU 2 EET programs

REQUIREMENTS FOR THE OPTION: 26 credits

COMPUTER ENGINEERING TECHNOLOGY OPTION: (26 credits)

PRESCRIBED COURSES (11 credits)

CMPEN 431(3), CMPET 403(4), CMPET 401(3), CMPET 402(1) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)

2nd Programming Elective: Select 3 credits from: CMPSC 402(3), CMPSC 122(3) (Sem: 7-8)

Applications Elective: Select 4 credits of technical electives from: CMPET 412(4), EET 456(4) (Sem: 7-8)

CMPET Technical Electives: Select 8 credits from EE 341(3), EE 441(3), EE 453(3), EET 402(4), EET 408(4), EET 413(4), EET 414(4), EET 431(4), EET 433(4), EET 478(4), ET 496(1) (Sem: 7-8)

GENERAL ELECTRICAL ENGINEERING TECHNOLOGY OPTION: (26 credits)

ADDITIONAL COURSES (26 credits)

System Elective: Select 8 credits of technical electives from: EET 408(4), EET 409(4), EET 433(4) (Sem: 7-8)

Electronics Elective: Select 4 credits from: EET 402(4), EET 431(4) (Sem: 7-8)

GEET Technical Electives: Select 8 credits of GEET technical electives from: CMPET 401(3), CMPET 402(1), CMPEN 431(3), EE 441(3), EE 453(3), EE 458(3), CMPET 403(3), EET 410(4), CMPET 412(4), EET 413(4), EET 414(4), EET 456(4), EET 478(4), ET 496(1) (Sem: 7-8)

Select 6 credits from any previous elective list plus CMPSC 452(3), EMCH 211(3), EMCH 212(3), ME 201(3) (Sem: 6-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2007

Blue Sheet Item #: 35-06-217

Review Date: 2/20/08

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

CL

Environmental Resource Management

University Park, College of Agricultural Sciences (E R M)

PROFESSOR ROBERT D. SHANNON, *Program Coordinator*

Environmental Resource Management (E R M) is an interdisciplinary, science-based major designed to prepare students to understand and critically analyze environmental problems ranging from local to global in scale, identify solutions, and communicate ideas related to environmental and natural resource issues. The E R M major also focuses on human interactions with the environment by emphasizing the management of environmental resources. The E R M curriculum begins with foundation course work in the biological, physical and social sciences. Later courses apply these principles to the management and sustainability of the environment, and include environmental problem-solving, ecosystem management and environmental law. The third tier, offered through three options, affords considerable flexibility and the opportunity to specialize.

The major prepares students for employment in a variety of environmental positions, including environmental consulting, public agencies, and nonprofit organizations. Students are also prepared for graduate school or law school upon graduation. Realizing the wide range of career possibilities requiring diverse types of academic preparation, three options of study are available: the Environmental Science Option, the Soil Science Option and the Water Science Option.

In the Environmental Science Option, students select a minor or choose a group of courses (totaling at least 18 credits) that focus on a particular aspect of the environment. Examples include watersheds and water resources, climate change impacts, geographic information systems, energy and air pollution, sustainability leadership, ecology, environmental engineering, wildlife and fisheries science, and others. Courses and minors from across the University can be selected to develop a student's area of specialization in the Environmental Sciences Option.

In the Soil Science Option, students take courses in soil composition and properties, conservation, nutrient management, soil ecology, GIS and mapping. This option also allows the student to choose courses that support their strengths and interests. The option prepares students for positions with private, public, and non-profit firms that evaluate soils for various uses, delineate wetlands, perform environmental assessments, and identify and remediate contaminated soils.

In the Water Science Option, students take courses in hydrologic measurements, wetland conservation, stream restoration, stream and lake ecology, watershed management, and land use practices to control runoff and erosion. The option also prepares students for positions with private, public, and non-profit firms that evaluate water quality and quantity issues, delineate wetlands, perform environmental and hydrological assessments, and identify and remediate contaminated aquatic resources.

For the B.S. degree in Environmental Resource Management, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27-30 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR: 1-3 credits

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-8 credits

REQUIREMENTS FOR THE MAJOR: 93-108 credits

(This includes 27-30 credits of General Education courses; 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GS courses; 9 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 47-48 credits

PRESCRIBED COURSES (33 credits)

CAS 100 GWS(3), ENGL 015 GWS(3), ERM 151(1)[\[1\]](#) (Sem: 1-2)
CHEM 110 GN(3)[\[1\]](#), CHEM 111 GN(1)[\[1\]](#), CHEM 112 GN(3), CHEM 202(3) (Sem: 1-4)
SOILS 101 GN(3)[\[1\]](#), SOILS 102(1) (Sem: 3-4)
ASM 327(3)[\[1\]](#), ENGL 202C GWS(3), ERM 300(3)[\[1\]](#), ERM 411(3) (Sem: 5-8)

ADDITIONAL COURSES (14-15 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)
AGBM 101 GS(3) or ECON 102 GS(3) (Sem: 1-2)
PHYS 211 GN(4) or PHYS 250 GN(4); STAT 200 GQ(4) or STAT 240 GQ(3) or STAT 250 GQ(3) (Sem: 3-4)

REQUIREMENTS FOR THE OPTION: 48-60 credits

ENVIRONMENTAL SCIENCE OPTION: (58-60 credits)

PRESCRIBED COURSES (20 credits)

BIOL 110 GN(4)[\[1\]](#), BIOL 220W GN(4), GEOG 160 GS(3) (Sem: 3-4)
CED 201(3) (Sem: 5-6)
ERM 412(3)[\[1\]](#), ERM 413(3)[\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (14-16 credits)

MATH 111 GQ(2) or MATH 141 GQ(4) (Sem: 1-2)
AGBM 200(3) or ERM 402(3) or MGMT 215(3) (Sem: 3-8)
GEOSC 001(3) or GEOSC 303(3) (Sem: 5-6)
Select 6 credits from any 400-level ERM courses (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

Select 3 credits in communications/entrepreneurship/leadership (Sem: 3-8)
Select 3 credits in ecology (Sem: 5-6)
Select 18 credits of specialization/minor courses in consultation with adviser (Sem: 5-8)

SOIL SCIENCE OPTION: (48-50 credits)

PRESCRIBED COURSES (12 credits)

SOILS 403(2), SOILS 412W(3), SOILS 416(4)[\[1\]](#) (Sem: 3-6)
SOILS 450(3) (Sem: 5-8)

ADDITIONAL COURSES (18-20 credits)

BIOL 110 GN(4) or BIOL 127 GN(3) (Sem: 1-4)
GEOSC 001(3) or GEOSC 020 GN(3) (Sem: 1-4)
Select 3-4 credits from AGRO 028(3), BIOL 220W GN(4), FOR 203(3), HORT 101 GN(3), TURF 235(3) (Sem: 3-6)
Select 3 credits from ERM 433(3), ERM 440(3), SOILS 402(3), SOILS 419(3), SOILS 420(3) (Sem: 3-8)
Select 3 credits from SOILS 401(3), SOILS 405(3), GEOSC 452(3) (Sem: 3-8)
Select 3 credits from ERM 444(3), FOR 475(3), SOILS 404(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 18 credits of supporting courses in consultation with adviser. (Sem: 5-8)

WATER SCIENCE OPTION: (58-60 credits)

PRESCRIBED COURSES (35 credits)

BIOL 110 GN(4) [\[1\]](#), BIOL 220W GN(4), GEOG 160 GS(3) (Sem: 3-4)

CED 201(3), ERM/ASM 309(3) (Sem: 5-6)

ERM 412(3) [\[1\]](#), ERM 413(3) [\[1\]](#), ERM/WFS 435(3), ERM 447(3), ERM 450(3), FOR 470(3) (Sem: 5-8)

ADDITIONAL COURSES (8-10 credits)

MATH 111 GQ(2) or MATH 141 GQ(4) (Sem: 1-2)

SOILS 401(3), SOILS 405(3) or GEOSC 452(3) (Sem: 5-8)

CE 370(3), ERM 440(3), ENT 425(3), FOR 303(3), FOR 403(3), WFS 410(3), or WFS 422(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 3 credits in communications/entrepreneurship/leadership (Sem: 3-8)

Select 12 credits of supporting courses in consultation with adviser (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lasted Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-004

Review Date: 04/08/2014

UCA Revision #1: 8/4/06

AG

Engineering Science

University Park, College of Engineering (E SC)

PROFESSOR JUDITH A. TODD, *Department Head; P. B. Breneman Chair and Professor of Engineering Science and Mechanics*

Engineering Science is a multidisciplinary honors program that emphasizes enhanced understanding and integrated application of engineering, scientific, and mathematical principles. The program is unique because it provides a broad foundation in the sciences and associated mathematics that underlie engineering and provides students the opportunity to obtain a depth of knowledge in an area of their choosing through technical electives and a research and design honors thesis. The curriculum is designed for students who seek to link the engineering disciplines with science. In addition to taking core courses in mathematics, physics and chemistry - (and biology for students in premedicine), students study thermodynamics, heat transfer, electromagnetics, solid and fluid mechanics, electrical devices, materials science, and topics selected as foundational and technical electives. During the junior year, students investigate a variety of research fields and identify a topic for their honor thesis research and design project. During the senior year, all students complete a capstone project on their chosen topic by writing a thesis that applies the scientific principles of research, design and analysis to engineering. Focus areas of study include, but are not limited to: electrical, mechanical, civil, biomedical, and materials engineering and are expected to be interdisciplinary. Hence, Engineering Science students achieve both depth and breadth in engineering and science, are able to function across disciplines, and graduate well prepared for advanced studies as well as professional employment.

The specific program objectives are tied to the mission of the program as described above. They target the major outcomes expected of Engineering Science students and are flexible and readily adaptable to meet changing constituent needs.

Program Educational Objectives

The expected accomplishments of Engineering Science graduates in the first several years following graduation are:

1. participate in lifelong learning activities including, but not limited to, masters, doctorate, medical, and law degrees, continuing education, leadership development, management training, and global involvement/awareness;
2. engage in practice in a wide variety of fields including, but not limited to, electrical systems, electronics, mechanical systems, materials development, forensics, biomaterials, medicine, law, and business;
3. research, develop, design and/or utilize new products, processes, materials, devices, systems, and/or tools;
4. communicate findings and best practices at conferences and meetings, and to the general public through presentations, technical publications (journals, reports, memoranda), and patents;
5. use state-of-the-art tools for the benefit of society;
6. participate in and promote the values of diversity and sustainability in society; and
7. encourage and foster future generations of engineers through mentoring, service, and outreach.

Program Outcomes (Student Outcomes)

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Enrollment is limited to students who have demonstrated that they can benefit from the advanced courses of the curriculum; therefore a minimum grade-point average of 3.0 is required. Qualified students can participate in the integrated undergraduate graduate (IUG) program to streamline the process of earning B.S. and M.S. degrees.

ENTRANCE TO MAJOR -- In addition to the minimum grade-point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*Since Engineering Science is an honors program, admission is limited to students who attain a cumulative GPA of at least 3.0 by the end of the entrance to major semester. In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the non-Honors B.S. degree in Engineering Science, 131 credits and a 2.50 grade-point average are required. The Honors degree requires the same number of total credits but a minimum of 16 honors Jr./Sr. year credits and a higher grad-point average as determined by the faculty. The baccalaureate program in Engineering Science is accredited by the Engineering Accreditation Commission of ABET, Inc. www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 113 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (65 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), EDSGN 100(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#) (Sem: 1-2)
MATH 220 GQ(2-3), MATH 230(4), MATH 251(4) [\[1\]](#), ME 302(4), PHYS 212 GN(4) [\[1\]](#), PHYS 214 GN(2) (Sem: 3-4)
EE 210(4), ESC 312(3), ESC 407(3) [\[1\]](#), ESC 409(1), ESC 414(3) [\[1\]](#), ESC 433(1) (Sem: 5-6)
ESC 404(3) [\[1\]](#), ESC 410(3), ESC 411(2), ENGL 202C GWS(3) (Sem: 7-8)

ADDITIONAL COURSES (21 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)
ESC 261(3) or CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 1-2)
ECON 102 GS(3), ECON 104 GS(3), or ECON 014 GS(3) (Sem: 1-2)
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
EMCH 210H(5) [\[1\]](#) or EMCH 210(5) [\[1\]](#); EMCH 212H(3) [\[1\]](#) or EMCH 212(3) [\[1\]](#) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (27 credits)

Select 15 credits from the department Foundational Elective List (Sem:5-6)

Select 12 credits from the department Technical Elective List (Students may apply 3 credits of ROTC or 3 credits of co-op experience.) (Sem: 7-8)

Integrated Undergraduate/Graduate Study - B.S. Engineering Science - M.S. Engineering Science and Mechanics

The flexibility and strength in fundamentals of the Engineering Science curriculum provides an opportunity for Engineering Science undergraduate students to participate in the ESM Integrated Undergraduate/Graduate (IUG) program. Application for IUG status may be made in the fifth or subsequent semesters.

The IUG program promotes the interchange of ideas across all branches of the scientific and engineering disciplines from both theoretical and experimental perspectives. Students in the composite degree program are expected to pursue interdisciplinary studies in areas that encompass nano- and bionanotechnology, advanced materials, electromagnetic, mechanics, microelectronics, nanoelectronics and bioelectronics, neural engineering, photonics and photovoltaics (among others) and they are expected to embrace multidisciplinary perspectives across departmental, College, and University boundaries.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2006 (E SC); Spring Semester 2012 (Integrated B.S./E.Sc.-M.S./E.Mch. & Integrated B.S./E.Sc.-M.S./E.Sc. AND Program Description)

Blue Sheet Item #: 42-04-021 (E SC); 33-04-176, 40-05-034 (Add Integrated B.S./E.Sc.-M.S./E.Mch. & Integrated B.S./E.Sc.-M.S./E. Sc.)

Last Revised by the Department: Fall Semester 2013

Review Date: 01/14/2014

R & T: Approved 5/24/2013

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

EN

Asian Studies

University Park, College of the Liberal Arts (ASIA)

PROFESSOR ON-CHO NG, *Department Head, Asian Studies*

This is an interdisciplinary major, with a strong disciplinary core, for students who want a basic understanding of the background and contemporary aspect of East, Southeast, or South Asia. Students are expected to focus their coursework largely on one major Asian area.

For the B.A. degree in Asian Studies, a minimum of 124 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 24 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 31 credits^[1]

PRESCRIBED COURSES (6 credits)

ASIA 100 GH;IL(3) (Sem: 1-4)

ASIA 405Y IL(3) (Sem: 5-8)

ADDITIONAL COURSES (7 credits)

Select 4 credits beyond the 12-credit level of proficiency in an Asian language:

CHNS 110(4), JAPNS 110 IL(4), or the equivalent (Sem: 3-6)

Select 3 credits from the following: HIST 174 GH;IL(3), HIST 175 GH;IL(3), or HIST 176 GH;IL(3) (Sem 1-4)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 18 credits from a department list with at least 12 credits of which are to be at the 400-level; independent study credits selected in consultation with adviser; additional further credits in language studies may be permitted up to 6 credits (credit received for a specific course will not count in more than one category) (Sem: 1-8)

Courses not on the list that deal substantially with some aspect of Asia in any discipline may also count, pending approval of an adviser.

Integrated Undergraduate-Graduate (IUG) Degree Program B.A. in Asian Studies and Master of International Affairs (M.I.A.)

The integrated undergraduate-graduate (IUG) degree program (B.A. in Asian Studies, Chinese, or Japanese/M.I.A. in International Affairs) provides an opportunity for strong students in these majors to complete a master's degree with 5 total years of study.

An increasingly globalized economy is likely to escalate the demand for graduate training in international affairs. The career choices for graduates with this training will also expand sharply.

The integrated degree program prepares students for a variety of careers requiring an interdisciplinary background in Asian Studies or Asian languages and international affairs. Examples of types of entities hiring in these areas are federal, state, and local governments, international organizations, multinational corporations, international banking and financial institutions, media organizations and journalism, consulting firms, policy research centers, and development assistance programs and foundations. The School of International Affairs (SIA) Master of International Affairs (M.I.A.) represents a professional degree designed to prepare students to thrive in these increasingly global career paths.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the *Graduate Bulletin*.

The number of openings in the integrated B.A./M.I.A. program is limited. Admission will be selective based on specific criteria set by the School of International Affairs. Students shall be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study. Students must be admitted to the program prior to taking the first course they intend to count towards the graduate degree. Specific requirements:

1. Must be enrolled in the Asian Studies, Chinese, or Japanese B.A. program.
2. Must apply to and be accepted into The Graduate School and the M.I.A. program in the School of International Affairs. Students must complete the [Graduate School application](#). All applicants will submit GRE scores, two letters of recommendation, and a personal statement addressing their reasons for pursuing a graduate degree in international affairs and discussing their plans and goals.
3. Although the program has no fixed minimum grade point average, an applicant is generally expected to have a minimum overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
4. Must include a plan of study identifying undergraduate credits to be applied to the M.I.A. degree elective requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
5. Must provide written endorsement from the head of Asian Studies.

M.I.A. Requirements for the Integrated B.A./M.I.A.

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the *Graduate Bulletin*.

M.I.A. portion of the integrated B.A./M.I.A. will require the completion of a minimum of 42 graduate credits, at least 18 of which are from six core courses consisting of INTAF 801(3), 802(3), 803(3), 804(3), 506(3) and INTAF 590(3). The remaining credits are attained through completion of the approved elective courses. A minimum of 6 credits must be at the 500-level.

In addition to the core curriculum and elective courses, M.I.A. degree candidates must complete either: (i) a master's paper; or (ii) a supervised internship.

placement. If the first option is chosen and the candidate opts to complete a paper, he/she must complete 3 credits of INTAF 594. The master's paper will involve integrating and showing mastery of the subject matter of the student's curricular emphasis, and may also involve original research. If the second option is chosen, the candidate will complete 3 credits of INTAF 595. The student will participate in a supervised internship of sufficient depth and professionalism that will allow the student to experience the integration of his/her curricular studies in an actual professional environment. A reflective paper will be submitted as a part of this credit requirement.

In order to graduate, M.I.A. degree students also will need to demonstrate proficiency in a language other than English. Proficiency will be defined as follows: (i) four semesters of a Penn State language sequence or its equivalent (15 credits with a quality grade of B or better using a 4.0 scale); (ii) native acquisition, as shown by the candidate's personal history and approved by the SIA faculty; or (iii) performance on a proficiency evaluation sufficient to equal four semesters of language learning; for this purpose, either Penn State's proficiency certification process or another pre-approved proficiency assessment may be used. Language study does not provide credits towards the M.I.A. degree.

If students accepted into the IUG program are unable to complete the M.I.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

M.I.A. Degree	Integrated B.A./M.I.A. Degree
Core Courses (18)	Core Courses (18)
INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3)	INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3)
Electives (21)	Electives (21)
Course choices are from a pre-approved list in the SIA, or by SIA faculty-approved substitution.	A maximum of 12 credits may be double counted toward the B.A. and the M.I.A. Courses that may be double-counted include: ASIA 463, ASIA 465, ASIA 469, ASIA 475, ASIA 401, ASIA 481, ASIA 486, ASIA 400, ASIA 430, ASIA 501, ASIA 502, and ASIA 577.
Capstone (3)	Capstone (3)
Master's Paper (INTAF 594) or Internship (INTAF 595)	Master's Paper (INTAF 594) or Internship (INTAF 595)

Courses that may be double-counted include: ASIA 463, ASIA 465, ASIA 469, ASIA 475, ASIA 476, ASIA 481, ASIA 486, ASIA 489, ASIA 493, ASIA 501, ASIA 502, and ASIA 577. No more than 6 of the double-counted credits may be at the 400-level. The graduate thesis or other graduate culminating/capstone experience (including any associated credits and/or deliverables) may not be double counted towards any other degree.

Tuition Charges, Grant-in-Aid, and Assistantships

Students admitted to the School of International Affairs through the IUG with a B.A. in Asian Studies, Chinese, or Japanese may be considered to receive financial assistance. Students on graduate assistantships must adhere to the [course load limits set forth in the Graduate Bulletin](#).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-041

Review Date: 4/5/16

UCA Revision #2: 7/27/07

LA

Earth Science and Policy

University Park, College of Earth and Mineral Sciences (EARSP)

PROFESSOR PETER J. HEANEY, *Associate Head for Undergraduate Programs*

Global climate change and environmental change on a more local scale present major challenges for our future. The solution to these problems requires people with a solid scientific understanding of natural earth/environmental systems, and also an understanding of the social, economic, and political dimensions of these problems. This major is intended to bridge the gap between the physical, natural sciences (the earth sciences) and the social sciences, with the understanding that intelligent, effective solutions to environmental problems will require people who grasp the scientific and social dimensions of environmental problems. This major is intended to produce graduates who not only grasp these problems, but who can also apply a wide array of quantitative tools and fundamental principles to generate practical solutions.

Students develop a sense of community through a set of common upper level courses and they gain practical experience through a mandatory internship course. A variety of options are offered to enable greater depth of study in aspects of science and policy related to water and land use, climate change, and energy; a general option is also available.

This major will provide an excellent preparation for careers in environmental law, environmental consulting, and non-profit organizations engaged in the science and policy of environmental issues. This major will also serve as a strong basis for postgraduate studies in environmental science and policy.

WATER AND LAND USE OPTION: This option is intended to develop a focus on the role of water and land in environmental issues, encompassing scientific, economic, and policy dimensions of groundwater and surface water resources and of land use. The Water and Land Use option is appropriate both for students who intend to pursue postgraduate degrees and for students who want to enter the work force.

CLIMATE CHANGE OPTION: This option is intended for students who want to focus on the science and policy related to climate change, including the scientific basis for identifying, understanding, and potentially mitigating climate change. The option also develops a basis for understanding the economic costs and risks related to climate change, as well as the political dimensions. This option is appropriate both for students who intend to pursue postgraduate degrees and for students who want to enter the work force.

ENERGY OPTION: This option is designed to provide a focus on aspects of Earth science and policy related to energy, including the origins of energy and mineral resources, the future of these resources, and the alternatives for meeting future needs. This option also provides a focus on the economics of energy systems and the political dimensions of the challenges related to our energy future. The Energy option is appropriate both for students who intend to pursue postgraduate degrees and for students who want to enter the work force.

GENERAL OPTION: This option is intended for students who desire a broad sampling of Earth science as it relates to policy or those who desire to design their own focus within Earth science in consultation with an academic adviser. The General option is appropriate both for students who intend to pursue postgraduate degrees and for students who want to enter the work force.

For the B.S. degree in Earth Science and Policy, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits (33 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR) (See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR: (Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES: (Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM: (Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-2 credits

REQUIREMENTS FOR THE MAJOR: 106-108 credits (This includes 33 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 9 credits of GWS courses; 3 credits of GH courses; 6 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 79-81 credits

PRESCRIBED COURSES (49 credits)

BIOL 110 GN(4), CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), ECON 102 GS(3), EMSC 100S GWS(3)[71], GEOG 126 GS;US;IL(3), PHIL 118 GH(3), PLSC 001 GS(3), STAT 200 GQ(4) (Sem: 1-4)

EARTH 402(3)[11] (Sem: 6)

EBF 472(3) [11] GEOG 364(3), GEOSC 450(3)[11] (Sem: 6-8)

EARTH 400(3), EARTH 495(3) (Sem: 7-8)

ADDITIONAL COURSES (30-32 credits)

ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)

MATH 083 GQ(4)[11] or MATH 110 GQ(4)[11] or MATH 140 GQ(4)[11] (Sem: 1-2)

GEOSC 001(3) or GEOSC 020 GN(3) (Sem: 1-4)

MATH 111 GQ(2) or MATH 141 GQ(4) (Sem: 2-3)

PHYS 211(4) or PHYS 250(4) (Sem: 2-3)

CAS 100 GWS(3) or ENGL 202C GWS(3) (Sem: 2-5)

CED 201(3) or EBF 200 GS(3) (Sem: 2-5)

Select 8 credits from: GEOSC 201(4)[11], GEOSC 202(4)[11], GEOSC 203(4)[11] (Sem: 3-6)

REQUIREMENTS FOR THE OPTION: 27 credits

WATER AND LAND USE OPTION: (27 credits)

ADDITIONAL COURSES (27 credits) Must include one W course

Select 3 credits from: EARTH 111 GN;US(3), GEOG 160 GS(3), SOILS 101 GN(3) (Sem: 2-5)

Select 12 credits from: ERM 300(3), FOR 455(3), FOR 470(3), GEOG 363(3), GEOSC 340(3), GEOSC 402 IL(3), GEOSC 409(3), GEOSC 413(3), GEOSC 452(3), GEOSC 483(3), SOILS 422(3), SOILS 450(3) (Sem: 3-8)

Select a total of 12 credits from the following:

3 to 6 credits from: CED 429(3), CED 431(3), ECON 302 GS(3) (Sem: 4-8)

6 to 9 credits from: CED 309(3), CED 409(3), CED 410(3), GEOG 430(3), GEOG 431(3), GEOG 434(3), GEOG 439(3), PLSC/STS 460(3), PUBPL 481(3) (Sem: 4-8)

CLIMATE CHANGE OPTION: (27 credits)

ADDITIONAL COURSES: (27 credits) Must include one W course

Select 3 credits from: EARTH 002 GN(3), GEOG 110 GN(3), METEO 003 GN(3), METEO 004 GN(3) (Sem: 2-5)

Select 12 credits from: GEOG 310(3), GEOG 412(3), GEOSC 320(3), METEO 201(3), METEO 466(3) (Sem: 4-8)

Select a total of 12 credits from the following:

3 to 6 credits from: CED 429(3), CED 431(3), ECON 302(3) (Sem: 4-8)

6 to 9 credits from: CED 230(3), CED 410(3), EMSC/STS/SOC 420(3), GEOG 430(3), GEOG 434(3), GEOG 438W(3), PLSC/STS 460(3), STS 201(3) (Sem: 4-8)

ENERGY OPTION: (27 credits)**ADDITIONAL COURSES:** (27 credits) Must include one W course

Select 3 credits from: EARTH 100 GN(3), EGEE 101 GN(3), EGEE 102 GN(3) (Sem: 2-5)

Select 9 credits from: EGEE 302(3), EGEE 401(3), EGEE 412(3), GEOSC 451(3), GEOSC 454(3), GEOSC 483(3) (Sem: 4-8)

Select 3 credits from: EBF 484(3), GEOG 424 US;IL(3) (Sem: 4-8)

Select 12 credits from: CED 230(3), CED 410(3), EMSC/STS/SOC 420(3), GEOG 430(3), GEOG 434(3), GEOG 438W(3), GEOG 439(3), PLSC/ STS 460(3), STS 201 GN(3) (Sem: 4-8)

GENERAL OPTION: (27 credits)**ADDITIONAL COURSES:** (27 credits) Must include one W course

Select 3 credits from: EARTH 002 GN(3), EARTH 100 GN(3), EARTH 111 GN;US(3), EGEE 101 GN(3), GEOG 010 GN (3), GEOG 030N GS(3), GEOG 160 GS(3), METEO 003 GN(3), METEO 004 GN(3), SOILS 101 GN(3) (Sem: 2-5)

Select 12 credits from: ERM 300(3), EGEE 302(3), EGEE 412(3), FOR 455(3), FOR 470(3), GEOG 310(3), GEOG 363(3), GEOG 412(3), GEOSC 320(3), GEOSC 340(3), GEOSC 402 IL(3), GEOSC 409(3), GEOSC 413(3), GEOSC 451(3), GEOSC 452(3), GEOSC 454(3), GEOSC 483(3), METEO 466(3), SOILS 422(3), SOILS 450(3) (Sem: 4-8)

Select a total of 12 credits from the following:

3 to 6 credits from: CED 429(3), CED 431(3), EBF 484(3), ECON 302 GS(3), GEOG 424 US;IL(3), (Sem: 4-8)

6 to 9 credits from: CED 230(3), CED 309(3), CED 409(3), CED 410(3), ERM 411(3), GEOG 130 GS(3), GEOG 430(3), GEOG 431(3), GEOG 434(3), GEOG 438W(3), GEOG 439(3), EMSC/STS/SOC 420(3), PLSC 403(3), PLSC 412(3), PLSC 426(3), PLSC/STS 460(3), PLSC 471(3), PLSC 490(3), STS 201(3) (Sem: 4-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[71] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EM SC 100S GWS.

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-01-052

Review Date: 08/16/2011

Earth Sciences

University Park, College of Earth and Mineral Sciences (EARTH)

PROFESSOR PETER J. HEANEY, Associate Head for Undergraduate Programs

This major provides a comprehensive program in environmental sciences based on a strong emphasis in earth sciences. It is especially directed toward study of the problems that arise from the complex interaction of man's technological and social activities with the natural environment. Graduates are in demand for positions in government, industry, and consulting. Professional activities include gathering and evaluating data on environments; management and coordination of specialized programs in environmental control and modification; and industrial and government planning. Suitable choices of courses may qualify students for graduate work in several fields.

For the B.S. degree in Earth Sciences, a minimum of 123 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 99-101 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GWS courses.)

PRESCRIBED COURSES (31 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), EMSC 100S GWS(3)[\[71\]](#), MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-2)

PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 1-4)

BIOL 110(4) (Sem: 3-4)

ADDITIONAL COURSES (36 credits)

ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)

Select 15 credits of introductory earth science from the following list (courses may not double count with minor requirements): EARTH 2 GN(3), EARTH 101 GN(3), EARTH 103 GN(3), EARTH 105 GN(3), METEO 3 GN(3), GEOG 30N GS;IL(3), GEOG 110 GN(3), GEOG 111 GN(3), GEOG 115 GN(3), GEOG 160(3), GEOSC 1(3), GEOSC 21 GN(3), SOILS 101 GN(3) (Sem: 1-6)

Select 15 credits[\[1\]](#) of advanced earth science from the following list (courses may not double count with minor requirements): GEOG 430(3), GEOG 438W(3), GEOG 412(3), GEOSC 204(4), GEOSC 320(3), GEOSC 340(3), GEOSC 402(3), GEOSC 416(3), METEO 300(4), METEO 431(3) (Sem: 3-8)

Select 3 credits of writing-intensive courses from within Earth and Mineral Sciences to include, but not limited to: GEOG 412(3), GEOG 310(3), GEOSC 402(3), GEOSC 470(3), METEO 471(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (32-34 credits)

Select 3-4 credits of advanced math, statistics, computer science in consultation with an adviser (Sem: 5-8)

Select 3 credits of field, laboratory experience in consultation with an adviser (Sem: 5-8)

Select 8-9 credits in other approved courses (Students may apply 6 credits of ROTC) (Sem: 5-8)

Select 18 credits[\[1\]](#), in consultation from an adviser, from one of the following Earth and Mineral Sciences interdisciplinary minors:

CLIMATOLOGY

MARINE SCIENCE

WATERSHEDS & WATER RESOURCES

EARTH SYSTEMS

GLOBAL BUSINESS STRATEGIES FOR EARTH AND ENVIRONMENTAL INDUSTRIES

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[71] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EM SC 100S GWS.

Last Revised by the Department: Summer Session 2000

Blue Sheet Item #: 28-05-017

Review Date: 1/20/04

UCA Revision #1: 8/3/06

Department Head Change: 4/12/05

EM

Energy Business and Finance

University Park, College of Earth and Mineral Sciences (EBF)
University Park, Smeal College of Business

Professor Seth Blumsack, Undergraduate Program Chair

The major in Energy Business and Finance, offered jointly by the College of Earth and Mineral Sciences and the Smeal College of Business, combines training in business, economics, finance, and the physical sciences with a core of courses focusing on energy and related industries. The major helps students prepare for careers in the energy industry, as well as financial institutions, nonprofit groups, and international organizations dealing with energy issues. The curriculum also provides a strong base for further study in business, economics, law, and social sciences.

Entrance Requirement: To be eligible for entrance into the Energy Business and Finance major, a degree candidate must satisfy requirements for entrance to major. Specific entrance requirements include:

1. The degree candidate must have completed more than 29.1 credits of course work.
2. The degree candidate must have a cumulative grade point average of at least 2.0.
3. Complete the following entrance to major requirements: ECON 102 GS(3)[1], MATH 140 GQ(4)[1].

GENERAL OPTION

The General option of the Energy Business and Finance major is appropriate for students who want a broad understanding of the earth and environmental sciences in preparation for careers in industry, commerce, and government.

ENERGY LAND MANAGEMENT OPTION

The Energy Land Management Option in the major of Energy Business and Finance focuses on issues in the acquisition of sub-surface exploration rights. Thus, it is designed to prepare students for a career as a land professional in an energy exploration company. The curriculum, designed in consultation with the American Association of Professional Landmen, requires courses in real estate fundamentals, energy law, geographic information sciences, petroleum engineering and petroleum geology.

Integrated B.S. in Energy Business and Finance (EBF) and M.S. in Energy and Mineral Engineering (EME)

The integrated undergraduate-graduate (IUG) program between the Energy Business and Finance undergraduate program and the Energy and Mineral Engineering graduate program enables academically superior and research-focused EBF undergraduate students to also obtain an M.S. degree in Energy and Mineral Engineering in five years of study. Students should refer to the Energy and Mineral Engineering graduate program in the Graduate Program Bulletin for the IUG admission and degree requirements.

(http://bulletins.psu.edu/bulletins/whitebook/graduate_degree_programs.cfm?letter=E&program=grad_eme.htm)

For the B.S. degree in Energy Business and Finance, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(25-27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-12 credits

REQUIREMENTS FOR THE MAJOR: 90-102 credits

(This includes 25-27 credits of General Education Courses: 4-6 credits of GN courses, 9 credits of GWS courses, 6 credits of GQ courses, and 6 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 66 credits

PRESCRIBED COURSES (45 credits)

MATH 140 GQ(4)[1] (Sem: 1)
ECON 102 GS(3)[1] (Sem: 1)
MATH 141 GQ(4)[1] (Sem: 2)
EBF 200 GS(3)[1] (Sem: 3)
ACCTG 211(4), ECON 104 GS(3), ECON 302 GS(3)[1] (Sem: 3-4)
EBF 301(3)[1], EBF 304(3)[1] (Sem: 5-6)
EME 460(3)[1], IB 303 IL(3) (Sem: 5-8)
RM 302(3)[1] (Sem: 6-8)
EBF 401(3)[1], EBF 473(3) (Sem: 7-8)

ADDITIONAL COURSES (21 credits)

Select 3 credits from: CAS 100 GWS(3) or EMSC 100S GWS(3) (Sem: 1)
Select 3 credits from: CMPSC 101 GQ(3), CMPSC 200 GQ(3), CMPSC 201 GQ(3), CMPSC 202 GQ(3) (Sem: 1-2)
Select 3 credits from: ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)
Select 3 credits from: BA 243(4), BLAW 243(3), or ERM 411(3) (Sem: 3-4)
Select 3 credits from: EBF 472(3)[1], STAT 301 GQ(3)[1], or STAT 401(3)[1] (Sem: 3-4)
Select 3 credits from: EBF 483(3)[1] or EBF 484(3)[1] (Sem: 7-8)
Select 3 credits from: ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 24-36 credits

ENERGY LAND MANAGEMENT OPTION (25 credits)

PRESCRIBED COURSES (12 credits)

GEOSC 001(3)[1] (Sem: 1-2)
GEOG 160 GS(3)[1], GEOG 363(3) (Sem: 5-8)
EBF 402(3) (Sem: 7-8)

ADDITIONAL COURSES (13 credits)

Select 4 credits from: PHYS 211 GN(4)[1] or PHYS 250 GN(4)[1] (Sem: 1-2)
Select 3 credits from: GEOG 361(3)[1], GEOG 362(3)[1], GEOG 364(3)[1], or GEOG 463(3)[1] (Sem: 5-6)
Select 3 credits from: EBF 411(3) or GEOG 454(3) (Sem: 7-8)
Select 3 credits from: EBF 410(3) or PNG 405(3) (Sem: 7-8)

GENERAL OPTION: (24-36 credits)

ADDITIONAL COURSES (9-10 credits)

Select 6-7 credits from: CHEM 110 GN(3), EARTH 100 GN(3), EARTH 101 GN;US(3), EARTH 103 GN(3), EARTH 111 GN;US(3), EARTH 150 GN(3), EGEE 101 GN(3), EGEE 102 GN(3), EGEE 120 GS;US;IL(3), GEOG 110 GN(3), GEOG 115 GN(3), GEOSC 002 GN(3), GEOSC 010 GN(3), GEOSC 020 GN(3), GEOSC 021 GN(3), GEOSC 040 GN(3), MATSE 081 GN;IL(3), METEO 003 GN(3), METEO 101 GN(3), PHYS 211 GN(4) or PHYS 250 GN(4) (Sem: 1-4)
Select 3 credits from: CED 404(3), CED 429(3), CED 431(3), EBF 411(3), EBF 483(3)[if not selected for requirement above], ECON 490(3), EME 301(3), GEOG 424 US;IL(3), GEOG 430(3), GEOG 431(3), GEOG 444(3), GEOG 493(3), GEOSC 402 IL(3), GEOSC 454(3), METEO 473(3), PL SC 490(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (15-26 credits)

Select either:

Select from one of the following minors:

Arabic, Chinese, Civic and Community Engagement, Earth Systems, Energy Engineering, Entrepreneurship and Innovation, Environmental Resource Management, Environmental Systems Engineering, Geographic Information Science, Geosciences, Mathematics, Meteorology, Mining Engineering, Petroleum and Natural Gas Engineering, Russian, Spanish, Statistics, Watersheds and Water Resources or a relevant minor selected in consultation with an adviser;

Or

A concurrent major in any subject;

Or

A 15 credit semester-long education abroad program approved by the professor in charge of the E B F major;

Or

A minor in Asian Studies together with an approved E B F summer term abroad experience.

Course Substitutions for the Integrated B.S. in Energy Business and Finance (EBF) and M.S. in Energy and Mineral Engineering (EME)

As many as twelve of the credits required for the master's degree may be applied to both the B.S. and M.S. degrees. A minimum of six credits counted for both the B.S. and M.S. degrees must be at the 500-level. Thesis and culminating/capstone experience credits may not be double counted. The undergraduate degree program officer will determine the specific undergraduate required courses for which the 500-level courses may be used to substitute to meet institutional and accreditation requirements.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-056

Review Date: 4/14/2015

Minor editorial changes to comply with University editorial style (Publications): 8/23/06

EM

Electrical and Computer Engineering Technology

Penn State Erie, The Behrend College (ECET)

This major prepares graduates for careers in such varied areas as electronics, microprocessors, computer hardware and software, communications, instrumentation and control, and power. The major consists of two options, one in Electrical Engineering Technology, the other in Computer Engineering Technology. Both options provide education in applied mathematics, physics, electrical and electronic circuit analysis and design, microprocessors, instrumentation and quality control. The Electrical Engineering Technology option provides specialty education in control theory, communication systems, and power systems. The Computer Engineering Technology option provides specialty education in software development, embedded computer systems, and networking. Both options in the major culminate with a capstone design project involving an actual design or manufacturing problem, often sponsored by industry. Graduates may qualify as engineering technologists working side-by-side with engineers, scientists, and other skilled workers in these capacities. Occupations include electrical and electronic systems design, microprocessor applications, instrumentation and control, computer programming, electrical testing, plant engineering, quality control, management, and technical sales and service.

Entrance to Major Requirements:

To be eligible for entrance to the Electrical and Computer Engineering Technology major, a student must have: 1) attained at least a 2.00 cumulative grade-point average; 2) completed MATH 081 or MATH 026, and MATH 082 or MATH 022, and MATH 083 or MATH 140, and PHYS 250, and earned a grade of C or better in each of these courses.

For the B.S. degree in Electrical and Computer Engineering Technology, a minimum of 128 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in PRESCRIBED COURSES course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 107 credits

(This includes 24 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GWS courses; and 3 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 89 credits

PRESCRIBED COURSES (57 credits)

CMPET 5(1), CMPET 117(3)[\[1\]](#), CMPET 120(1), CMPET 211(3), EET 101(3), EET 109(1), EET 114(4)[\[1\]](#), EET 118(1)[\[1\]](#), EET 212(4), EET 214(3), EET 215(1) (Sem: 1-4)

CAS 100 GWS(3), ENGL 202C GWS(3) (Sem: 3-6)

MATH 210 GQ(3), MATH 211 GQ(3) (Sem: 4-6)

EET 280(1) (Sem: 4-8)

CMPET 301(3)[\[1\]](#), CMPET 355(3)[\[1\]](#), EET 315(3)[\[1\]](#), EET 341(3)[\[1\]](#) (Sem: 5-6)

MGMT 409(3)[\[1\]](#) (Sem: 5-8)

EET 480(1)[\[1\]](#), EET 490(3)[\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (32 credits)

EET 2(1) or ET 2(1) (Sem: 1-4)

EGT 101(1) and EGT 102(1) or EGT 119(2) (Sem: 1-4)

MATH 026 GQ(3)[\[1\]](#) or MATH 081 GQ(3)[\[1\]](#), MATH 022 GQ(3)[\[1\]](#) or MATH 082 GQ(3)[\[1\]](#), MATH 083 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#) (Sem: 1-4)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-8)

CHEM 110 GN(3), CHEM 111 GN(1), PHYS 250 GN(4)[\[1\]](#), and 2 credits of science GN(2) or PHYS 150 GN(3)[\[1\]](#), PHYS 151 GN(3)[\[1\]](#), and 4 credits of science

GN(4), EET 450(3) or QC 450(3) (Sem: 5-8)

EET 275(3) or EET 220(2) and 1 credit in 200 level or higher of technical electives from school-approved list (Sem: 4-8)

REQUIREMENTS FOR THE OPTION: 18 credits

ELECTRICAL ENGINEERING TECHNOLOGY OPTION: (18 credits)

PRESCRIBED COURSES (9 credits)

EET 330(3)[\[1\]](#) (Sem: 5-6)

EET 416(3)[\[1\]](#), EET 440(3)[\[1\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)[\[1\]](#)

Select 9 credits of technical electives at the 300 or 400 level from school-approved list (Students may apply 6 credits of ROTC.) (Sem: 7-8)

COMPUTER ENGINEERING TECHNOLOGY OPTION: (18 credits)

PRESCRIBED COURSES (9 credits)

CMPET 333(3)[\[1\]](#) (Sem: 5-6)

CMPET 456(3)[\[1\]](#), CMPET 457(3)[\[1\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)[\[1\]](#)

Select 9 credits of technical electives at the 300 or 400 level from school-approved list (Students may apply 6 credits of ROTC.) (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-02-010

Review Date: 10/08/2013

UCA Revision #1: 8/3/06

BD

Economics

*University Park, College of the Liberal Arts (ECLBA)
World Campus*

PROFESSOR Barry Ickes, *Head, Department of Economics*

This major is designed for those who seek a broad understanding of the operation of the economic system and training in the methods and uses of economic analysis. Graduates are equipped for employment in many areas of business operations, labor unions, and agencies of government at all levels; and to undertake the graduate work necessary to become professional economists.

Students may choose either a Bachelor of Arts or a Bachelor of Science program. An honors program is also offered.

For the B.A. degree in Economics, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Entrance Requirement: To be eligible for entrance into the Economics (ECLBA) major, a degree candidate must satisfy requirements for entrance to the major.

Specific entrance requirements include:

The degree candidate must have completed the following entrance to major requirements with a grade of C or better: ECON 102 and ECON 104.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits [\[1\]](#)

PRESCRIBED COURSES (18 credits)
ECON 102 GS(3), ECON 104 GS(3) (Sem: 3-4)
ECON 106(3), ECON 302 GS(3), ECON 304 GS(3), ECON 306(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (18 credits)
Select 18 credits in Economics 300 or 400 level with department approval, including at least 9 credits at the 400 level (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2010

Blue Sheet Item #: 38-06-119

Review Date: 04/13/2010

UCA Revision #1: 8/3/06

LA

Economics

*University Park, College of the Liberal Arts (ECLBS)
World Campus*

PROFESSOR Barry Ickes, *Head, Department of Economics*

This major is designed for those who seek a broad understanding of the operation of the economic system and training in the methods and uses of economic analysis. Graduates are equipped for employment in many areas of business operations, labor unions, and agencies of government at all levels; and to undertake the graduate work necessary to become professional economists.

The B.S. degree program is intended for students with a strong interest in quantitative skills. An honors program is also offered.

For the B.S. degree in Economics, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Entrance Requirement: To be eligible for entrance into the Economics (ECLBS) major, a degree candidate must satisfy requirements for entrance to the major.

Specific entrance requirements include:

The degree candidate must have completed the following entrance to major requirements with a grade of C or better: ECON 102 and ECON 104.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 26 credits

REQUIREMENTS FOR THE MAJOR: 55 credits^[1]

(This includes 6 credits of General Education GQ courses.)

PRESCRIBED COURSES (18 credits)

ECON 102 GS(3), ECON 104 GS(3) (Sem: 1-2)

ECON 302 GS(3), ECON 304 GS(3) (Sem: 3-4)

ECON 106(3), ECON 306(3) (Sem: 3-6)

ADDITIONAL COURSES (7 credits)

MATH 110 GQ(4) or MATH 140 GQ(4); CMPSC 101 GQ(3) or CMPSC 203 GQ(4) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (30 credits)

Select 3 credits in social and behavioral sciences from department list (Sem: 1-8)

Select 6 credits in arts, humanities, social and behavioral sciences from department list (Sem: 1-8)

Select 3 credits in quantification from department list (Sem: 1-8)

Select 18 credits in economics at the 300 or 400 level with department approval, including at least 9 credits at the 400 level (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2010

Blue Sheet Item #: 38-06-120

Review Date: 04/13/2010

LA

Economics

Penn State Erie, The Behrend College (ECNS)

The Economics major is a program of study with a liberal arts orientation. The broad liberal arts background serves as a foundation for advanced study in the methods and techniques of economic analysis. Use of mainframe and microcomputers as analytical and problem-solving tools is emphasized in the program's upper-division courses. Students may choose upper-division courses in several areas of specialization, including business cycles and forecasting, economic theory, industrial organization, international economics, labor economics, managerial economics, and regional economics.

For the B.A. degree in Economics, a minimum of 122 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(3 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 19 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 37 credits

(This includes 3 credits of General Education GWS courses.)

PRESCRIBED COURSES (19 credits)

ECON 102 GS(3), ECON 104 GS(3), ECON 302 GS(3), ECON 304 GS(3) (Sem: 1-6)

ENGL 202A GWS(3) (Sem: 3-6)

SCM 200(4) (Sem: 3-6)

ADDITIONAL COURSES (18 credits)

Select 18 credits in BECON, ECNS, or ECON above the 300 level, in consultation with an adviser. [Where appropriate toward a specialized undergraduate field of study, the student may petition the director of the School of Business to take up to a maximum of 6 credits in closely related fields toward a major.] (Sem: 3-8)

Last Revised by the Department: Summer Session 1998

Blue Sheet Item #: 26-02-034

Review Date: 01/30/01 (Editorial Change)

UCA Revision #1: 8/3/06

BD

Electrical Engineering

Penn State Erie, The Behrend College (EE BD)

This major provides students with a strong foundation in electrical engineering through a combination of classroom study, projects, and laboratory experience. Analysis and design of electrical and computer systems are stressed. Built upon a core of science and mathematics courses, this major has the objective of educating graduates to be problem solvers. Students acquire the ability to work as members of a team toward successful attainment of a common goal, preparing them for work in industry, or further study in graduate school. In addition, written and oral communication skills are developed from an early stage, culminating in a senior design project that stresses communication as well as engineering content.

In addition to completing a broad-based science and mathematics core, students pursue their interest in electrical engineering by studying the principles of electrical circuits and microelectronics, digital and computer systems, control and communications systems, and electromagnetic fields and waves. Students obtain a broad-based electrical engineering education that is specialized through the selection of technical electives courses. The student will be required to analyze and solve a significant electrical engineering design problem during the senior year.

Entrance Requirement: In addition to the Carnegie unit and minimum GPA requirements described by University policies, all students applying for entrance to any of the engineering majors at The Behrend College must have at least a 2.0 cumulative GPA by the end of the semester prior to applying for entrance to the major and have completed, with a minimum grade of C: CHEM 110 GN(3), MATH 140 GQ(4), MATH 141 GQ(4), and PHYS 211 GN(4). These courses must be completed by the end of the semester during which the admission to major process is carried out.

For the B.S. degree in Electrical Engineering, a minimum of 130 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 106 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses; 3 credits of GS courses.)

PRESCRIBED COURSES (91 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), EDSGN 100S(3), CMPSC 201 GQ(3) (Sem: 1-2)
CMPEN 271(3) [\[1\]](#), CMPEN 275(1) [\[1\]](#), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), MATH 220 GQ(2-3) [\[1\]](#), MATH 230(4) [\[1\]](#), MATH 250(3) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#),
PHYS 212 GN(4), PHYS 214 GN(2) (Sem: 1-4)
EE 210(4) [\[1\]](#), EMCH 211(3), ENGL 202C GWS(3) (Sem: 3-4)
EE 310(4) [\[1\]](#), EE 312(3) [\[1\]](#), EE 313(4) [\[1\]](#), EE 316(3) [\[1\]](#), EE 331(3) [\[1\]](#), EE 352(4) [\[1\]](#), EE 380(3) [\[1\]](#), EE 383(1) [\[1\]](#), STAT 301(3) [\[1\]](#) (Sem: 5-6)
EE 360(3) [\[1\]](#), EE 387(3) [\[1\]](#), EE 400(3) [\[1\]](#), EE 401(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-6)
CMPSC 122(3) or EMCH 012(3) or ME 201(3) or ME 300(3) or PHYS 237(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits of technical courses from school-approved list.

(These credits must be selected to fulfill the engineering science and design requirements of the major.) (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2001

Blue Sheet Item #: 29-01-017

Review Date: 7/11/02

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

BD

Electrical Engineering

Capital College (E ENG)

AB SHAFAYE, *Program Chair, School of Science, Engineering, and Technology*

The Bachelor of Science degree in Electrical Engineering provides a solid background in electrical engineering sciences. It also provides an opportunity for students to pursue interests in electrical and electronic circuits, including digital circuits and VLSI and its fabrication, microprocessors and their applications, electromagnetics, communications, control systems, and digital image processing and computer vision. Through participation in a senior capstone design, the curriculum emphasizes written as well as verbal communication and teamwork approach among the students to attain a common goal.

This program helps its graduates develop capabilities to analyze and design a variety of electrical and electronic systems found in many industrial and government settings as well as provide a foundation for further graduate studies. A strong background in the fundamentals is built through a broad base core in basic sciences (physics and chemistry) and mathematics as well as engineering sciences.

For a B.S. degree in Electrical Engineering a minimum of 135 credits is required.

Entry to Major Requirements:

Entry to the Electrical Engineering major requires that the student has completed: MATH 140 GQ(4), MATH 141 GQ(4), PHYS 211 GN(4), and CHEM 110 GN(3), CHEM 111 GN(1). A 2.00 or higher cumulative grade-point average is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 113-115 credits

(This includes 24 credits of General Education courses: 3 credits of GWS courses; 6 credits of GS courses; 9 credits of GN courses; 6 credits of GQ courses.)

PRESCRIBED COURSES (93 credits)

CHEM 110 GN(3), CHEM 111 GN(1), EDSGN 100(3) (Sem: 1-2)

ENGR 320Y GS:US:IL(3), EMCH 211(3), MATH 140 GQ(4)[\[11\]](#), MATH 141 GQ(4)[\[11\]](#), MATH 220 GQ(2), MATH 230(4), MATH 250(3), PHYS 211 GN(4)[\[11\]](#), PHYS 212 GN(4)[\[11\]](#), PHYS 213 GN(2), PHYS 214 GN(2) (Sem: 1-4)

EE 330(4), ENGL 202C GWS(3) (Sem: 3-4)

SSET 295(1) (Sem: 4)

EE 485(3) (Sem: 5-6)

CMPEH 472(4), CMPEN 271(3)[\[11\]](#), CMPEN 275(1)[\[11\]](#), EE 210(4), EE 310(4)[\[11\]](#), EE 311(3), EE 317(2), EE 341(3), EE 352(4)[\[11\]](#), EE 405(1), EE 406(3)[\[11\]](#), EE 461(4),

EE 481(4) (Sem: 7-8)

ADDITIONAL COURSES (9-10 credits)

Select 3 credits from: ECON 102 GS(3) or ECON 104 GS(3) or ECON 14 GS(3) (Sem: 1-4)

Select 3 credits from: CMPSC 201 GQ(3), or CMPSC 121 GQ(3), or CMPSC 202 GQ(3) (Sem: 3-4)

Select 3-4 credits from MATH 444(3)[\[11\]](#) or MATH 446(3)[\[11\]](#) or STAT 200 GQ(4)[\[11\]](#) (Sem: 4-6)

SUPPORTING COURSES AND RELATED AREAS (11-12 credits)

Select 11-12 credits in consultation with an academic adviser and in support of the student's interests. (Sem: 7-8)

Integrated B.S./M.S. Program in Electrical Engineering

The Electrical Engineering program offers a limited number of academically superior Bachelor of Science candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science and the Master of Science in Electrical Engineering. The ability to coordinate as well as concurrently pursue the two degree programs enables students to earn the two degrees in five years.

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science and Master of Science degrees. However, the total course load is reduced due to the maximum of 12 credits that can count towards both degrees. A minimum of 7 credits proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted. The fourth year of the IUG program differs from the fourth year of the Bachelor of Science program due to the courses that count toward the Master of Science Degree requirements. Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student's academic performance will be conducted at the end of the first semester of the senior year for a typical student in the program. Students who have not maintained a 3.4 GPA in their Math and Electrical Engineering courses will be put on probationary status with respect to the IUG program. Their ability to continue in the IUG program will be based on academic performance in the last semester of their senior year. As part of the review in the senior year, students will be advised about the thesis requirement in the graduate program.

Students have the choice of receiving the B.S. degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years. If for any reason a student admitted to the IUG program is unable to complete the requirements for the Master of Science degree, the student will be permitted to receive the Bachelor of Science degree assuming all the undergraduate degree requirements have been satisfactorily completed. If students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

Admission Requirements

To initiate the application process, students must submit an *Integrated Undergraduate-Graduate (IUG) Degree in Electrical Engineering Application Form*, an official transcript, three letters of professional recommendation from individuals who can evaluate the applicant's potential, and a personal statement of technical interest and goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. In order to apply for the IUG program, students must have completed a minimum of 81 credits; therefore a typical student would apply after completing the fifth semester and before the end of the sixth semester. For consideration for acceptance into the program, students must have cumulative grade point average (GPA) of 3.4 or better and collective GPA of 3.4 or better in the following courses: CMPEN 271, CMPEN 275, E E 315 (or equivalent), E E 341, CMPEH 472 and all the designated MATH, PHYS, and CMPSC courses. Applications will be evaluated based on students' overall academic performance, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee of the Electrical Engineering program.

Degree Requirements

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science and Master of Science degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. The minimum of 7 credits double-counted must be at the 500 level. Thesis credits may not be double counted.

B.S. Degree Portion:

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TOTAL B.S. REQUIREMENTS: 134 credits
(12 double-counted with the M.S. Requirements)

General Education: 45 credits
(21 of these are included in the REQUIREMENTS FOR MAJOR)

Electives: 0-4 credits

Requirements for the Major: 110-113 credits

Prescribed Courses: 87 credits
As listed by the B.S. E ENG bulletin with the following change
CMPSC 436 can be replaced by an EEO 400 or System 400 Elective

Additional Courses: 14-17 credits
Select 3 credits from ECON 102 GS(3) or ECON 104 GS(3) or ECON 014 GS(3)
Select 3 credits from CMPSC 201 GQ(3) or CMPSC 121 GQ(3) or CMPSC 202 GQ(3)
Select 3-4 credits from MATH 444(3) or MATH 446(3) or STAT 200 GQ(4)
Select 5-7 credits from EE 315(5) or EE 210(4) and EE 314(3)

Supporting Courses and Related Areas: 9 credits
EMCH 524A (3), and
Electronics-Electromagnetics- Optics Option: one EEO 400-level (3) and One EEO 500-level (3), or
Systems Option: one System 400 (3) and One System 500-level (3).

M.S. Degree Portion:
TOTAL M.S. REQUIREMENTS: 31 credits
(12 double-counted with B.S. Requirements)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-056

Review Date: 1/10/2017

UCA Revision #1: 8/3/06
UCA Revision #2: 7/27/07

CA

**PROGRAM CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS
Begin Date of Enrollment Hold: September 10, 2010**

****Please Note:** Individuals interested in earning Pennsylvania teaching credentials for grades PK-8 should refer to the **Childhood and Early Adolescent Education** major.

Elementary and Kindergarten Education

Altoona College (EEDAL): Elementary Education Teaching Option
Berks College (EEDBL)
University Park, College of Education (EK ED)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR STEPHANIE SERRIERE, *in charge*

This major offers teaching options in Early Childhood Education and in Elementary Education. Students successfully completing this major will have met all of the requirements for the N-3 or K-6 College Instructional I certificate issued by the Pennsylvania Department of Education. Students must indicate their choice of teaching option at the time they make application for admission to a teacher education major. Students who are undecided at this time about which teaching option to select should contact their adviser and enroll in a field experience featuring participation in the classroom.

EARLY CHILDHOOD TEACHING OPTION: Students successfully completing this option will have met all of the requirements for the N-3 Instructional I certificate issued by the Pennsylvania Department of Education. Special courses in both human development and education are used to integrate understanding of preschool programs with relevant theories of child development.

ELEMENTARY EDUCATION TEACHING OPTION: Students successfully completing this option will have met all of the requirements for the K-6 Instructional I certificate issued by the Pennsylvania Department of Education.

For the B.S. degree in Elementary and Kindergarten Education, a minimum of 129.5 credits is required for the Early Childhood Teaching Option and a minimum of 122 credits is required for the Elementary Education Teaching Option. (See also [Teacher Education Programs](#).)

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
 (27-30 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
 (Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
 (Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
 (Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-3 credits

REQUIREMENTS FOR THE MAJOR: 101-117 credits
 (This includes 27-30 credits of General Education courses: 6 credits of GS, 6 credits of GQ, 6 credits of GH, and 9 credits of GN courses for both options. The Early Childhood Teaching option permits 3 credits of GHA.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 84.5-85.5 credits [\[1\]](#)

PRESCRIBED COURSES (57.5 credits)
 C I 295(2), EDPSY 014(3), ENGL 100(3), MATH 200 GQ(3) (Sem: 1-4)
 A ED 303(3), C I 495B(3), C I 495D(12), C I 495F(3), KINES 126(1.5), LL ED 400(3), LL ED 401(3), LL ED 402(3), MTHED 420(3), MUSIC 241(3), SCIED 458(3), SPLED 400(3), SS ED 430(3) (Sem: 5-8)

ADDITIONAL COURSES (15-16 credits)
 EDTHP 115 US(3) or EDTHP 115A GS;US(3) (Sem: 1-3)
 HIST 20 GH;US(3) or HIST 21 GH;US(3) (Sem: 1-4)
 STAT 100 GQ(3), STAT 200 GQ(4) or EDPSY 101 GQ(3) (Sem: 1-4)
 ECON 102 GS(3), ECON 104 GS(3) or ECON 14 GS(3) (Sem: 1-8)
 GEOG 20 GS;US;IL(3), GEOG 30N GS;IL(3), GEOG 126 GS;US;IL(3), GEOG 122 GH;US(3), GEOG 123 GS;IL(3), GEOG 320 GS;US;IL(3), GEOG 124 GS;IL(3), or GEOG 128 GS;IL(3) (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits in literature GH (Sem: 1-4)

Select 9 credits: 3 credits each (including one course with a lab) from the following GN biological science, earth science and physical science (Sem: 1-6)

REQUIREMENTS FOR THE OPTION: 16.5-30 credits

EARLY CHILDHOOD TEACHING OPTION: (27-30 credits) [\[1\]](#)

PRESCRIBED COURSES (15 credits)
 E C E 451(3), E C E 452(3), E C E 453(2), E C E 454(3), E C E 479(3), C I 495A(1) (Sem: 5-8)

ADDITIONAL COURSES (12-15 credits)
 H P A 101(3) or NUTR 251 GHA(3) (Sem: 1-2)
 HD FS 315 US(3) or SOC 030 GS(3) (Sem: 1-4)
 HD FS 229 GS(3) or PSYCH 100 GS(3) and PSYCH 212 GS(3) (Sem: 1-4)
 HD FS 428(3) or HD FS 429(3) (Sem: 5-8)

ELEMENTARY EDUCATION TEACHING OPTION: (16.5-19.5 credits) [\[1\]](#)

PRESCRIBED COURSES (1.5 credit)
 KINES 127(1.5) (Sem: 5-8)

ADDITIONAL COURSES (3-6 credits)
 HD FS 229 GS(3) or EDPSY 010 GS(3) or PSYCH 100 GS(3) and PSYCH 212 GS(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits in MATH or MTHED (Sem: 1-8)

Select 6 credits from EDTHP at the 400 level, ECE at the 400 level, SPLED at the 400 level, EDLDR 405(3), EDLDR 497(1-9), LL ED 497(1-9) (Sem: 5-8)

Select 3 credits in U.S. History (Sem: 1-8)

[1] A grade of C or better per course is required for teacher certification.

Last Revised by the Department: Summer Session 2005

Blue Sheet Item #: 33-06-097

Review Date: 2/12/08

UCA Revision #1: 8/3/06

ED

Elementary Education

Capital College (ELEM)

PROFESSOR CAROLYN GRIESS, cjg130@psu.edu, *Elementary Education Coordinator, School of Behavioral Sciences and Education*

The Elementary Education program at Penn State Harrisburg embodies the four tenets of our conceptual framework: constructivism, authenticity, reflectivity, and standards-based curriculum. Constructivism entails a student-centered approach in which teachers help learners build their own understandings. Authenticity refers to developing professional and pedagogical skills in authentic classroom settings; for example, in the junior and senior years prior to student teaching, the program offers extensive field experiences in a variety of settings enrolling students with diverse backgrounds and needs. Reflectivity relates to consciously analyzing course content and one's own learning for the purpose of deeper understanding and self-improvement. Standards-based curriculum means that our candidates are steeped in Pennsylvania Academic Standards as well as the standards of relevant professional organizations. Taken together, these tenets enable our candidates to become *lifelong reflective professionals committed to the learning of all students*.

Students will choose one of four options for the degree: PK-4 Early Childhood Education, Grades 4-8 English/Language Arts and Reading, Grades 4-8 Mathematics, and Grades 4-8 Social Studies. Upon successful completion of this major, students will have met all of the requirements for either the Grades PK-4, Grades 4-8 English/Language Arts and Reading, Grades 4-8 Mathematics, or Grades 4-8 Social Studies Instructional I certification issued by the Pennsylvania Department of Education. Students must apply for admission to the major.

Prior to the full-time student teaching experience in the senior year, candidates are expected to complete all other courses required for certification, including two field placements. On-campus courses are scheduled three or four days a week, while field experiences in nearby schools are scheduled part-time, three or four days per week.

For a B. ELED. degree in Elementary Education, PK-4 Early Childhood Option a minimum of 126 credits are required; Grade 4-8 English/Language Arts and Reading Option a minimum of 126 credits are required; Grade 4-8 Mathematics Option a minimum of 126 credits are required; and Grade 4-8 Social Studies Option a minimum of 126 credits are required.

Admission Requirements:

Applicants should have completed most of their first two years of college as well as the Entry to Major Requirements listed below with at least a 3.0 cumulative GPA (4.0 scale). The evaluation of prior college work is done on an individual basis by the Office of Enrollment Services at Penn State Harrisburg. Students admitted to the program must have the appropriate clearances. These include FBI fingerprint check, Act 151 child abuse history clearance, and Act 34 criminal record check.

Entry to Major Requirements:

Entry to the Elementary Education major requires the completion of 57 or more credits in required courses and the state's minimum cumulative GPA criteria of 3.0. Candidates must complete, with a grade of "C" or better, six (6) credits of college-level mathematics (MATH prefix), three (3) credits of college-level English literature and three (3) credits of college-level English composition. Candidates must submit scores on any entrance testing requirements established by the Pennsylvania Department of Education that are applicable at the time of application for entrance to major. Candidates who desire to pursue this major should plan their freshman and sophomore years carefully to ensure their successful progress during very structured junior and senior years. Semesters 5 through 8 are very structured.

Selective Retention:

Monitoring candidate progress in the elementary education program will occur each semester while the candidate is participating in the elementary education program. Candidates will be evaluated for retention in the program based on (1) maintaining a cumulative GPA of 3.0 or higher; (2) performance on any test requirements set out by the Pennsylvania Department of Education in force at the time of application for entrance to major; (3) satisfactory completion of required courses, including the field experience component; (4) adequate writing and speaking skills as demonstrated in various classroom assignments; and (5) a positive rating on the Penn State Harrisburg Professional Dispositions for Teacher Education Programs monitoring form. Candidates must pass any entrance test requirements set out by the Pennsylvania Department of Education in effect at the time of application for entrance to the major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(33 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education Course Requirements in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 114 credits^[1]

(This includes 33 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3-6 credits of GH courses; 6 credits of GS courses; 6 credits of GWS)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 90 credits

PRESCRIBED COURSES (72 credits)

GEOG 40 GS;IL(3), CI 280 GH(3), CI 295(2), EDPSY 14(3), EDTHP 115 US(3), ENGL 202A GWS(3), MATH 200 GQ(3) (Sem: 1-4)
EDMTH 301(3), EDSCI 454(3), EDUC 302(3), EDUC 304(3), EDUC 305(3), EDUC 315 US(3), EDUC 320(3), EDUC 352(3), EDUC 495A(1) (Sem: 5-6)
EDMTH 302(3), EDUC 303(3), EDUC 321(3), EDUC 353(3), EDUC 490(12), EDUC 495B(1), HLTH 306(2) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

Select 3 credits from: ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
Select 3 credits from: ECON 102 GS(3), ECON 104 GS(3), or ECON 14 GS(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 9 credits from GN courses from approved list: 3 credits each (including one with a lab) from biological science, earth science, and physical science. (Sem: 1-4)
Select 3 credits from any MATH (GQ) (Sem:1-4)

REQUIREMENTS FOR THE OPTION: 24 credits

PK-4 EARLY CHILDHOOD EDUCATION OPTION: (24 credits)

PRESCRIBED COURSES (18 credits)

HDFS 229 GS(3) (Sem:1-4)
EDUC 402(3), EDUC 403(3), EDUC 404(3), EDUC 410(3), EDUC 421(3) (Sem: 5-7)

ADDITIONAL COURSES (6 credits)

Select 3 credits from: HIST 3 GH;US(3), HIST 12 GH;US(3), HIST 20 GH;US(3), or HIST 21 GH;US(3) (Sem: 1-4)
Select 3 credits of literature from: CMLIT 1 GH;IL(3), CMLIT 2 GH;IL(3), CMLIT 3 GH;IL(3), CMLIT 4 GH;IL(3), CMLIT 5 GH;US;IL(3), CMLIT 6 GH;IL(3), CMLIT 10 GH;IL(3), CMLIT 11 GH;IL(3), CMLIT 100 GH;IL(3), CMLIT 101 GH;US;IL(3), CMLIT 105 GH;IL(3), CMLIT 106 GH;IL(3), CMLIT 107 GH;IL(3), CMLIT 108 GH;IL(3), CMLIT 110 GH;US;IL(3), CMLIT 111 GH;IL(3), CMLIT 141 GH;US;IL(3), CMLIT 184 GH;IL(3), CMLIT 185 GH;IL(3), ENGL 1 GH(3), ENGL 2 GH(3), ENGL 103 GH(3), ENGL 104 GH(3), ENGL 129 GH(3), ENGL 133 GH(3), ENGL 134 GH(3), ENGL 135 GH;US(3), ENGL 135S GH;US(3), ENGL 139 GH;US(3), ENGL 140 GH(3), ENGL 180 GH(3), ENGL 182A GH;US;IL(3), ENGL 182C GH;IL(3), ENGL 184 GH;IL(3), ENGL 184S GH(3), ENGL 185 GH;IL(3), ENGL 189 GH;IL(3), ENGL 191 GH(3), ENGL 194 GH;US;IL(3), ENGL 262 GH(3), ENGL 263 GH(3), ENGL 265 GH(3), ENGL 268 GH(3) (Sem: 1-4)

ENGLISH/LANGUAGE ARTS AND READING (4-8) OPTION: (24 credits)**PRESCRIBED COURSES** (15 credits)

HDFS 239 GS(3) (Sem:1-4)

EDUC 321(3), EDUC 322(3), EDUC 416(3), ENGL 470(3) (Sem: 5-7)

ADDITIONAL COURSES (9 credits)

Select 3 credits from: HIST 3 GH;US(3), HIST 12 GH;US(3), HIST 20 GH;US(3), or HIST 21 GH;US(3) (Sem: 1-4)

Select 3 credits of British Literature: ENGL 221 GH(3), ENGL 222 GH(3), ENGL 440(3), ENGL 441(3), ENGL 442(3), ENGL 443(3), ENGL 444(3), ENGL 445(3), ENGL 446(3), ENGL 447(3), ENGL 448(3), ENGL 450(3), ENGL 451(3), ENGL 452(3), ENGL 453(3), ENGL 454(3), ENGL 455(3), ENGL 456(3), ENGL 457(3), or ENGL 458(3) (Sem: 1-6)

Select 3 credits of American Literature: ENGL 231 GH(3), ENGL 232 GH(3), ENGL 432(3), ENGL 433(3), ENGL 434(3), ENGL 435(3), ENGL 436(3), ENGL 437(3), ENGL 438(3), or ENGL 439(3) (Sem: 1-6)

MATHEMATICS (4-8) OPTION: (24 credits)**PRESCRIBED COURSES** (18 credits)

HDFS 239 GS(3), MATH 22 GQ(3), MATH 26 GQ(3), MATH 140 GQ(4), MATH 220 GQ(2) (Sem: 1-4)

EDUC 417(3) (Sem: 6-7)

ADDITIONAL COURSES (6 credits)

Select 3 credits from: HIST 3 GH;US(3), HIST 12 GH;US(3), HIST 20 GH;US(3), or HIST 21 GH;US(3) (Sem: 1-4)

Select 3 credits of literature from: CMLIT 1 GH;IL(3), CMLIT 2 GH;IL(3), CMLIT 3 GH;IL(3), CMLIT 4 GH;IL(3), CMLIT 5 GH;US;IL(3), CMLIT 6 GH;IL(3), CMLIT 10 GH;IL(3), CMLIT 11 GH;IL(3), CMLIT 100 GH;IL(3), CMLIT 101 GH;US;IL(3), CMLIT 105 GH;IL(3), CMLIT 106 GH;IL(3), CMLIT 107 GH;IL(3), CMLIT 108 GH;IL(3), CMLIT 110 GH;US;IL(3), CMLIT 111 GH;IL(3), CMLIT 141 GH;US;IL(3), CMLIT 184 GH;IL(3), CMLIT 185 GH;IL(3), CMLIT 189 GH;IL(3), ENGL 1 GH(3), ENGL 2 GH(3), ENGL 103 GH(3), ENGL 104 GH(3), ENGL 129 GH(3), ENGL 129H GH(3), ENGL 133 GH(3), ENGL 134 GH(3), ENGL 135 GH;US(3), ENGL 135S GH;US(3), ENGL 139 GH;US(3), ENGL 140 GH(3), ENGL 180 GH(3), ENGL 182A GH;US;IL(3), ENGL 182C GH;IL(3), ENGL 184 GH;IL(3), ENGL 184S GH;IL(3), ENGL 185 GH;IL(3), ENGL 189 GH;IL(3), ENGL 191 GH(3), ENGL 194 GH;US;IL(3), ENGL 262 GH(3), ENGL 263 GH(3), ENGL 265 GH(3), ENGL 268 GH(3) (Sem: 1-4)

SOCIAL STUDIES (4-8) OPTION: (24 credits)**PRESCRIBED COURSES** (21credits)

HDFS 239 GS(3), HIST 12 GH;US(3), HIST 20 GH;US(3), HIST 21 GH;US(3); HIST 320(3), PLSC 1 GS(3) (Sem:1-4)

EDUC 415(3) (Sem: 6-7)

ADDITIONAL COURSES (3 credits)

Select 3 credits of literature from: CMLIT 1 GH;IL(3), CMLIT 2 GH;IL(3), CMLIT 3 GH;IL(3), CMLIT 4 GH;IL(3), CMLIT 5 GH;US;IL(3), CMLIT 6 GH;IL(3), CMLIT 10 GH;IL(3), CMLIT 11 GH;IL(3), CMLIT 100 GH;IL(3), CMLIT 101 GH;US;IL(3), CMLIT 105 GH;IL(3), CMLIT 106 GH;IL(3), CMLIT 107 GH;IL(3), CMLIT 108 GH;IL(3), CMLIT 110 GH;US;IL(3), CMLIT 111 GH;IL(3), CMLIT 141 GH;US;IL(3), CMLIT 184 GH;IL(3), CMLIT 185 GH;IL(3), CMLIT 189 GH;IL(3), ENGL 1 GH(3), ENGL 2 GH(3), ENGL 103 GH(3), ENGL 104 GH(3), ENGL 129 GH(3), ENGL 129H GH(3), ENGL 133 GH(3), ENGL 134 GH(3), ENGL 135 GH;US(3), ENGL 135S GH;US(3), ENGL 139 GH;US(3), ENGL 140 GH(3), ENGL 180 GH(3), ENGL 182A GH;US;IL(3), ENGL 182C GH;IL(3), ENGL 184 GH;IL(3), ENGL 184S GH;IL(3), ENGL 185 GH;IL(3), ENGL 189 GH;IL(3), ENGL 191 GH(3), ENGL 194 GH;US;IL(3), ENGL 262 GH(3), ENGL 263 GH(3), ENGL 265 GH(3), ENGL 268 GH(3) (Sem: 1-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lasted Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-02-000

Review Date: 10/13/2015

R & T: 01/14/2014

UCA Revision #1: 8/3/06

[Comments](#)

CL

English

Penn State Erie, The Behrend College (ELISH)

This major offers courses in literary and cultural studies, and in various forms of writing. Students majoring in English may select the Literature or the Professional Writing Option. Both options share a common core of 13 credits and provide a sound foundation in the liberal arts and opportunities to develop creative and analytical skills. Students in the Literature Option select courses from three separate areas--The Canon and Its Critics, Cultural Studies, and Globality and Literature--and develop a broad understanding of the ways in which literature works in various critical and cultural contexts. Students in the Professional Writing Option follow a sequence of courses designed to develop and enhance writing skills in areas directly relevant to business and technical applications.

For the B.A. degree in English, a minimum of 120 credits is required. Each student must earn at least a grade of C or above in all courses required under Common Requirements, Prescribed, Additional, and Supporting courses.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 6 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin)

REQUIREMENTS FOR THE MAJOR: 45-48 credits

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 15 credits

PRESCRIBED COURSES (12 credits)
ENGL 200(3) (Sem: 3-4)
ENGL 312(3), ENGL 403(3) (Sem: 3-6)
ENGL 482W(3) (Sem: 6-8)

ADDITIONAL COURSES (3 credits)
ENGL 443(3) or ENGL 444(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 30-33 credits

LITERATURE, FILM, AND CULTURE OPTION: 30-33 credits

PRESCRIBED COURSES (12-15 credits)
CMLIT 453(3), ENGL 420(3), PHIL 409(3) (Sem: 4-8)
ENGL 494(3-6)* (Sem: 7-8)

*If the 6-credit option is selected, 3 credits count toward the 400-level Additional Courses requirement.

ADDITIONAL COURSES (15 credits)
Select 3 credits from COMM 150 GA(3) or INART 5 GA(3) or INART 110 GA(3) (Sem: 1-8)
Select 6 credits at the 200 level or below from CMLIT or ENGL (except ENGL 050) (Sem: 1-8)
Select 6 credits at the 400 level CMLIT or ENGL courses (except 400-level creative writing workshops) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)
Select 3 credits from the following: ENGL 477(3), ENGL/WMNST 489(3), ENGL/WMNST 490 US;IL(3), ENGL 492/WMNST 491(3) (Sem: 5-8)

REQUIREMENTS FOR THE PROFESSIONAL WRITING OPTION: 30 credits

PRESCRIBED COURSES (12 credits)
ENGL 100(3), ENGL 215(3), (Sem: 1-4)
ENGL 417(3) (Sem: 5-8)
ENGL 495(3) (Sem: 7-8)

ADDITIONAL COURSES (15 credits)
ENGL 418(3) or ENGL 419(3) (Sem: 5-8)
Select 12 credits from the following list, with at least 9 credits at the 400 level:
COMM 260W(3); COMM 315(3), ENGL 262 GH(3) or ENGL 263 GH(3) or ENGL 265 GH(3);
ENGL 415(3), ENGL 420(3), ENGL 425(3), ENGL 439(3), ENGL 479(1-3) (Sem: 3-8)

SUPPORTING COURSES (3 credits)
COMM 1(1-3), COMM 2(1-3), COMM 320(3), COMM 370(3), COMM 406(3), COMM 460(3), COMM 471(3), MKTG 301(3) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-06-044

Review Date: 04/10/2012

UCA Revision #2: 7/27/07

BC

Electro-Mechanical Engineering Technology

Altoona College

Berks College

University College: Penn State New Kensington, Penn State York (EMET)

PROFESSOR SVEN BILÉN, Head, School of Engineering Design, Technology, and Professional Programs, College of Engineering, University Park
 PROFESSOR IVAN E. ESPARRAGOZA, Director of Engineering Technology and Commonwealth Engineering, Penn State Brandywine
 PROFESSOR JENNILYN VALLEJERA, Program Coordinator, Penn State Altoona
 PROFESSOR TERRY SPEICHER, Program Coordinator, Penn State Berks
 PROFESSOR JOSEPH CUIFFI, Program Coordinator, Penn State New Kensington
 PROFESSOR HARLEY HARTMAN, Program Coordinator, Penn State York

The Electro-Mechanical Engineering Technology (B.S. EMET) degree program provides the basic undergraduate education required for a career as an electro-mechanical engineering technologist. The program emphasizes a breadth of knowledge in all fields of engineering technology related to typical, highly-automated manufacturing, production, or assembly plant processes. Basic coverage is provided in all major areas to technology involved in the operation and control of manufacturing and production processes, including instrumentation and monitoring methods, principles of machine design, automated control techniques, thermal and fluid sciences, computerized manufacturing systems, principles of electrical and electronic circuit operation, computer-aided drafting and design, economics of production, and statistical analysis and quality control.

The primary aim of the EMET program is to provide graduates with the knowledge and skills necessary to apply current methods and technology to the development, design, operation, and management of electro-mechanical systems, particularly in those industries where automated systems are prevalent.

Program Educational Objectives:

Specific educational objectives of the program expect that graduates of the program, within five years of graduation will be:

1. Capable of and actively involved in the specification, procurement, or integration of electromechanical systems
2. Capable of and actively involved in the operation, testing, or maintenance of electromechanical systems
3. Capable of and actively participating in project team activities
4. Capable of and actively involved in the preparation and delivery of technical documentation and communication

Program Outcomes (Student Outcomes):

At graduation, EMET students should have:

- a) An ability to select and apply the knowledge, techniques, skills, and modern tools of their disciplines to broadly-defined engineering technology activities,
- b) An ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies,
- c) An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes,
- d) An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives,
- e) An ability to function effectively as a member or leader on a technical team,
- f) An ability to identify, analyze, and solve broadly-defined engineering technology problems,
- g) An ability to communicate effectively regarding broadly-defined engineering technology activities,
- h) An understanding of the need for and an ability to engage in self-directed continuing professional development,
- i) An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity,
- j) A knowledge of the impact of engineering technology solutions in a societal and global context, and
- k) A commitment to quality, timeliness, and continuous improvement.

In addition, EMET graduates must demonstrate the knowledge and technical competency to:

- a) Use computer-aided drafting or design tools to prepare graphical representations of electromechanical systems.
- b) Use circuit analysis, analog and digital electronics, basic instrumentation, and computers to aid in the characterization, analysis, and troubleshooting of electromechanical systems.
- c) Use statics, dynamics (or applied mechanics), strength of materials, engineering materials, engineering standards and manufacturing processes to aid in the characterization, analysis, and troubleshooting of electromechanical systems.
- d) Use appropriate computer programming languages for operating electromechanical systems.
- e) Use electrical/electronic devices such as amplifiers, motors, relays, power systems, and computer and instrumentation systems for applied design, operation, or troubleshooting electromechanical systems.
- f) Use advanced topics in engineering mechanics, engineering materials, and fluid mechanics for applied design, operation, or troubleshooting of electromechanical systems.
- g) Use basic knowledge of control systems for the applied design, operation, or troubleshooting of electromechanical systems.
- h) Use differential and integral calculus, as a minimum, to characterize the static and dynamic performance of electromechanical systems.
- i) Use appropriate management techniques in the investigation, analysis, and design of electromechanical systems.

The major is organized as a four-year baccalaureate program with the corresponding Penn State admission requirements. Graduates of an associate degree in either electrical or mechanical engineering technology from Penn State may re-enroll in the EMET program. The College of Engineering ENGR students may enroll through "Change of Major" procedures. Students from an engineering technology program at another institution or community college accredited by ETAC of ABET may transfer into the program with advanced standing.

For the B.S. degree in Electro-Mechanical Engineering Technology, a minimum of 130 credits is required. This program is accredited at Penn State Altoona, Penn State Berks, Penn State New Kensington, and Penn State York of the University College by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR) (See description of General Education in front of Bulletin.)

FIRST-YEAR EXPERIENCE:

(Satisfied by the FYE program at the campus at which the student is enrolled in the EMET program)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 109-114 credits

(This includes 24 credits of General Education courses: 6 credits of GQ courses; 9 credits of GN courses; 6 credits of GWS courses; 3 credits of GH or GS courses.)

PRESCRIBED COURSES (73 credits)

MCHT 111(3)[1] (Sem: 1-2)

CMPET 117(3)[1], CMPET 120(1)[1], CMPET 211(3), EDSGN 100(3), EET 105(3), EET 114(4)[1], EET 118(1)[1], EET 212(4)[1], EET 275(3), EGT 114(2), EMET 100(1), EMET 215(3), EMET 222(3)[1], EMET 225(2), EMET 230(3)[1], EMET 325(3), EMET 326(3), EMET 330(3)[1], EMET 350(3), EMET 403(1) (Sem: 5-6)
 EMET 405(3), EMET 410(4), EMET 440(3), ENGL 202C GWS(3), IET 101(3), IET 333(2) (Sem: 7-8)

ADDITIONAL COURSES (27-31 credits)

Select 5-6 credits from MATH 40 GQ(5)[1]; or [MATH 22 GQ(3)[1] and MATH 26 GQ(3)[1]; or [MATH 81 GQ(3)[1] and MATH 82 GQ(3)[1] * (Sem: 1-2)

Select 3 credits of GH or GS from: ENGR 320Y GS;US;IL;WAC(3), STS 200 GS(3), STS 233 GH(3), or STS 245 GS;IL(3) (Sem: 2-8)

Select 10-11 credits from:

CAS 100A GWS(3); CAS 100B GWS(3) (Sem: 3-4)

MATH 83 GQ(4)[1]** or MATH 140 GQ(4)[1] (Sem: 3-4)

MATH 210 GQ(3) or MATH 141 GQ(4) (Sem: 3-4)

Select 3 credits from MATH 211 GQ(3)[1] or MATH 250(3)*** (Sem: 4-5)

Select 6-8 credits of GN courses from two of the following groups:

CHEM 110 GN(3) and CHEM 111 GN(1) (Sem: 4-6)

PHYS 150 GN(3) or PHYS 211 GN(4) or PHYS 250 GN(4) (Sem: 4-6)

PHYS 151 GN(3) or PHYS 212 GN(4) or PHYS 251 GN(4) (Sem: 4-6)

SUPPORTING COURSES AND RELATED AREAS (9-10 credits)

Select 3-4 credits of science courses, in consultation with an adviser, from the approved department list (Sem: 4-6)

Select 6 credits of General Technical Elective courses, in consultation with an adviser, from the approved department list (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

*students taking MATH 81 GQ(3) and MATH 82 GQ(3) must take MATH 83 GQ(4)

**students taking MATH 83(4) must take MATH 210(3) and MATH 211(3)

***Note that MATH 250 does not carry a C-requirement

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-040

Review Date: 8/22/2017

UCA Revision #1: 8/3/06 UCA Revision #2: 7/27/07

Comments

EN

Energy Engineering

University Park, College of Earth and Mineral Sciences (ENENG)

PROFESSOR SARMA V. PISUPATI, Undergraduate Program Chair

The undergraduate program in energy engineering is designed to reflect the growing impact and demand for energy in society and to equip students with the knowledge necessary to achieve the following career and professional goals: become valuable contributors in addressing society's energy needs and demands; successful leaders in advancing the technology and management of energy; innovators and entrepreneurs in the energy sector; and educators, practicing engineers, and national leaders on energy and associated environmental, health and safety, and policy and economics issues. The program integrates skill sets in the physical sciences (chemistry, engineering, mathematics, and physics) and social sciences (economics, policy, and management) to ensure successful career opportunities and growth within energy-related industries, government agencies, and academia.

The courses are structured to enable students to understand engineering fundamentals and apply the knowledge to solve problems in the production, processing, storage, distribution, and utilization of energy using multiple techniques as synthesis, analysis, design and case studies. Inquiry-based teaching methods and lab experiences are emphasized. The faculty research and scholarly activities are integrated into the curriculum. The program is designed to train students to be lifelong learners, problem solvers, and energy industry leaders. The educational opportunities are sufficiently flexible, broad, and diverse to enable students to tailor their educational experience to particular interests, background, and expected role in society. Flexibility in the curriculum allows other students in energy related programs such as agricultural and biological, chemical, civil, electrical, environmental, mechanical, mining, nuclear, and petroleum engineering, materials science and engineering, industrial health and safety, and energy business and finance to have dual or concurrent degrees, minors, or options (e.g., energy and fuels engineering option in chemical engineering).

The integration of knowledge and skills acquired during the course of study in the Energy Engineering program provides graduates with the following student outcomes:

1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to design and conduct experiments, as well as to analyze and interpret data
3. An ability to design a system, component, or process to meet desired needs
4. An ability to function on multi-disciplinary teams
5. An ability to identify, formulate, and solve engineering problems
6. An understanding of professional and ethical responsibility
7. An ability to communicate effectively
8. The broad education necessary to understand the impact of engineering solutions in a global and societal context
9. A recognition of the need for and an ability to engage in life-long learning
10. A knowledge of contemporary issues
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Energy Engineering Program Educational Objectives

Our graduates will be:

1. Employed in the public or private sectors in the areas of energy science, energy engineering or energy business management, or pursuing an advanced degree.
2. Contributing to development of solutions to society's current energy needs by integrating key science and engineering principles while being adaptable to changing organizational and societal needs;
3. Engaged in individual projects and multi-disciplinary teams designing, evaluating, and recommending methods and strategies for the efficient production, processing and utilization of renewable or non-renewable energy and addressing the associated environmental challenges;
4. Effectively communicating with management, coworkers, customers, clients and others in diverse environments;
5. Engaged in life-long learning process to maintain professional competency through training, participation in professional activities and leadership.

Entrance to Major Requirements:

In addition to the minimum grade point average (GPA) requirements described in the University Policies, the Energy Engineering entrance-to-major requirement must also be completed with a minimum grade of C: MATH 140 GQ(4)[1].

Integrated B.S. in Energy Engineering (ENENG) and M.S. in Energy and Mineral Engineering (EME)

The integrated undergraduate-graduate (IUG) program between the Energy Engineering undergraduate program and the Energy and Mineral Engineering graduate program enables academically superior and research-focused ENENG undergraduate students to also obtain an M.S. degree in Energy and Mineral Engineering in five years of study. Students should refer to the Energy and Mineral Engineering graduate program in the Graduate Program Bulletin for the IUG admission and degree requirements. (http://bulletins.psu.edu/bulletins/whitebook/graduate_degree_programs.cfm?letter=E&program=grad_eme.htm)

For the B.S. in Energy Engineering, a minimum of 131 credits is required. This baccalaureate program in Energy Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

GENERAL EDUCATION: 45 credits

(30 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 116 credits

(This includes 30 credits of General Education courses: 3 credits of GH courses; 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (84 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), EMSC 100S GWS(3)[88], MATH 140 GQ(4)[1], MATH 141 GQ(4), PHYS 211 GN(4) (Sem: 1-2)
EE 211(3), MATH 231(2), MATH 251(4), PHIL 103 GH(3), PHYS 212 GN(4) (Sem: 3-4)
EGEE 12(1), EGEE 302(3)[1], EGEE 304(3)[1], EGEE 411W(3)[1], EGEE 430(3)[1], EGEE 438(3)[1], EME 301(3)[1], EME 303(3)[1], FSC 431(3), MATSE 201(3) (Sem: 5-6)
ENGL 202C GWS(3), EGEE 437(3)[1], EGEE 441(3)[1], EGEE 451(3)[1], EGEE 464(3)[1], FSC 432(3) (Sem: 7-8)

ADDITIONAL COURSES (17 credits)

EBF 200 GS(3) or ECON 102 GS(3) or ECON 014 GS(3) (Sem: 1-2)
ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
CHEM 202(3) or CHEM 210(3) (Sem: 3-4)
CMPSC 200 GQ(3) or CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 3-4)
EME 460(3) or IE 302(3) (Sem: 7-8)
EGEE 494(2)[1] or EGEE 295/395/495(2)[1] (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 3 credits of EGEE electives from an approved list in consultation with an adviser.

Select 6 credits of professional courses from an approved list in consultation with an adviser. Other substitutions outside the approved list must be approved by petition.

Select 6 credits of technical electives from a broad list of energy related courses across colleges at Penn State. A list of suggested courses from energy-related departments at Penn State is provided. (Students may apply 6 credits of ROTC to some of the elective choices.) (Sem: 7-8)

Course Substitutions for the Integrated B.S. in Energy Engineering (ENENG) and M.S. in Energy and Mineral Engineering (EME)

As many as twelve of the credits required for the master's degree may be applied to both the B.S. and M.S. degrees. A minimum of six credits counted for both the B.S. and M.S. degrees must be at the 500-level. Thesis and culminating/capstone experience credits may not be double counted. The undergraduate degree program officer will determine the specific undergraduate required courses for which the 500-level courses may be used to substitute to meet institutional and accreditation requirements.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[88] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS can be substituted for EMSC 100 GWS.

Lastest Revised by the Department: Summer Session 2014

Blue Sheet Item #: 43-01-025

Review Date: 08/19/2014

EM

English

Capital College (ENGCL)

PROFESSOR JENNIFER HIRT, *Program Coordinator, School of Humanities*

This English major, with its three options, offers students the unique opportunity to study literature in an interdisciplinary context where the relationships among literature and art, history, music, philosophy, media, and American Studies can be investigated. The major offers courses in American, British, and world literatures, emphasizing their cultural and historical contexts as well as teaching students to interpret them from a variety of critical perspectives. Small classes in both creative and expository writing encourage students to develop their writing skills by working closely with faculty.

For a B. HUM. degree in English with a General English Option, a minimum of 120 credits is required. For the B. HUM. degree in English with Secondary Education Option, a minimum of 122 credits is required. For the B.HUM. degree in English with a Creative Writing Option, a minimum of 120 credits is required.

Entry to Major Requirements:

Entry to the English major requires: 1) a 2.00 or higher cumulative grade-point average; and 2) satisfaction of any entrance testing requirements set out by the Pennsylvania Department of Education in effect at the time of application for entrance to major.

CREATIVE WRITING OPTION: Emphasizing original works of fiction, poetry, creative nonfiction, and hybrid genres, the Creative Writing Option provides aspiring authors with a literary foundation in the craft of writing and revising original work, as well as practical skills in editing and publishing in traditional and new media formats.

GENERAL ENGLISH OPTION: With its emphases on interpretive skills, creativity, and writing, the General English Option provides a foundation for careers in such fields as publishing, public relations, communication, government and law, as well as a strong basis for graduate education.

SECONDARY EDUCATION OPTION: The Secondary Education Option enables the graduate to meet all the academic requirements for the Instructional I certificate for teaching at the secondary-school level, which is issued by the Pennsylvania Department of Education.

Students admitted to the program must have the appropriate clearances. These include FBI fingerprint check, Act 151 child abuse history clearance, and Act 34 criminal record check.

Students thinking seriously about entering the education program should plan their freshman and sophomore years carefully. Semesters 5 through 8 are very structured.

Entry to English Major, Secondary Education option requires the following additional requirements:

1. A minimum grade point average of 3.0.
2. Completion of ENGL 15 GWS(3) or ENGL 30 GWS(3) and three credits of literature from approved list with a C or higher grade.
3. Completion of six credits of college-level mathematics (MATH or STAT prefixes) with a C or higher grade.
4. Satisfaction of any entrance testing requirements set out by the Pennsylvania Department of Education in effect at the time of application for the major.

Selective Retention (Secondary Education Option):

Following entrance to the major, STUDENTS will be evaluated for retention in the program based on:

1. maintaining a cumulative GPA of 3.0 or higher;
2. completion of required courses with a C or higher grade;
3. an acceptable or above rating on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

To be eligible to student teach, STUDENTS must:

1. maintain a cumulative GPA of 3.0 or higher;
2. complete with a C or higher grade all required Content and Education Courses;
3. Satisfaction of any entrance testing requirements set out by the Pennsylvania Department of Education in effect at the time of application for entrance to major;
4. submit and pass the Writing Proficiency Portfolio that demonstrates their proficiency as writers (see English Program Coordinator for specific instructions and deadlines);
5. be rated acceptable or above on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

In order to successfully complete the Secondary Education option, STUDENTS must:

1. complete EDUC 490 with a grade of C or higher;
2. maintain a cumulative GPA of 3.0 or higher;
3. complete with a grade of C or higher, all required Content and Education Courses;
4. complete a presentation portfolio; and
5. be rated acceptable or above on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

*FOR MORE DETAILED INFORMATION SEE THE SECONDARY EDUCATION HANDBOOK.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6-15 of these credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-18 credits

BACHELOR OF HUMANITIES DEGREE REQUIREMENTS: 18 credits

(See description of Bachelor of Humanities Degree Requirements in *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 45-74 credits

(This includes 6-15 of General Education courses: General English Option, 6 credits of General Education Arts (GA) and/or Social and Behavioral Science (GS) courses; Secondary Education Option, 6 credits of General Education Quantification (GQ) courses, 3 credits of General Education Social Sciences (GS) courses, and 6 credits of General Humanities (GH) courses.)

At least 15 credits of Prescribed, Additional, and/or Supporting courses must be taken at the 400 level.

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 21 credits

PREScribed COURSES (6 credits)[\[11\]](#)

ENGL 200W(3) (Sem: 5-6)

ENGL 444(3) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)

Select 3 credits from the following: ENGL 221 GH(3), ENGL 221W(3), ENGL 222 GH(3), ENGL 222W(3), ENGL 231 GH(3), ENGL 231W(3), ENGL 232 GH(3), ENGL 232W(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits) (At least 9 credits must be at the 300-400 level)

Select 3 credits in American ethnic literature or African-American literature from department list (Sem: 3-8)

Select 3 credits in world literature or comparative literature from department list (Sem: 3-8)

Select 3 credits in American literature at the 300 or 400 level from department list (Sem: 5-8) [\[1\]](#)

Select 3 credits in British literature at the 300 or 400 level from department list (Sem: 5-8) [\[1\]](#)

REQUIREMENTS FOR THE OPTION: 24-53 credits**CREATIVE WRITING OPTION:** (27 credits)**PRESCRIBED COURSES** (12 credits)

ENGL 212(3) [\[1\]](#), ENGL 213(3) [\[1\]](#), ENGL 214(3) [\[1\]](#), COMM 342 WAC(3) [\[1\]](#) (Sem: 2-4)

ADDITIONAL COURSES (12 credits)

In semesters 3-5, take 6 credits from this list: ENGL 136 GH(3) [\[1\]](#), ENGL 180 GH(3) [\[1\]](#), ENGL 191 GH(3), ENGL 192 GH(3), ENGL 209(3), ENGL 210(3), ENGL 211(3), ENGL 262 GH(3), ENGL 263 GH(3), ENGL 265 GH(3) or COMM 346(3)

In semesters 5-8, take 6 credits from this list: ENGL 412(3), ENGL 413(3), ENGL 415(3), ENGL 420(3), ENGL 422(3), ENGL 423(3), ENGL 424(3), ENGL 425(3), ENGL 497(3), ENGL 498(3) or COMM 446(3)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits from courses designated as Literature, Writing, or Rhetoric (any courses with an ENGL, except ENGL 4, 5, 15, 202, or CMLIT prefix) (Sem: 3-8) or from the department approved list.

GENERAL ENGLISH OPTION: (24 credits)**ADDITIONAL COURSES** (6 credits)

Select 3 credits from the following: ENGL 50 GA(3), ENGL 210(3), ENGL 212(3), ENGL 213(3), ENGL 215(3), ENGL 250(3), ENGL 412(3), ENGL 413(3), ENGL 415(3), ENGL 416(3), ENGL 417(3), ENGL 418(3), ENGL 419(3), ENGL 420(3), ENGL 421(3), ENGL 422(3), ENGL 423(3), ENGL 425(3), ENGL 470(3), ENGL 491(3) (Sem: 3-8) [\[1\]](#)

Select 3 credits from the following: ENGL 100(3), ENGL 191 GH(3), ENGL 196 GH:US:IL(3), ENGL 261(3), ENGL 262 GH(3), ENGL 263 GH(3), ENGL 265 GH(3), ENGL 268 GH(3), ENGL 400(3), ENGL 401(3), ENGL 407(3), ENGL 458(3), ENGL 482(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 12 credits in Literature, Writing, and/or Rhetoric (Sem: 3-8)

Select 6 credits from General Education Arts (GA) and/or Social and Behavioral Sciences (GS) (Sem: 3-8)

SECONDARY EDUCATION OPTION: (53 credits)**PRESCRIBED COURSES** (44 credits)

HDFS 239 GS(3) (Sem: 1-2)

EDPSY 14(3) (Sem: 1-3)

CI 280 GH(3) (Sem: 3-4)

EDUC 313(2), EDUC 314(3), EDUC 315 US(3), EDUC 322(3), EDUC 416(3), EDUC 458(3), EDUC 490(12) (Sem: 5-8)

EDUC 459(3), ENGL 470(3) (Sem: 6-7) [\[1\]](#)

ADDITIONAL COURSES (9 credits)

Select 6 credits of General Education Quantification courses (GQ) with a MATH or STAT prefix (Sem: 1-4)

Select 3 credits of GH literature from department list (Sem: 1-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #:46-01-067

Review Date: 8/22/2017

R & T: 02/24/2015

Program coordinator updated: 6/12/17

CL

English

Abington College (ENGAB)

Altoona College (ENGAL)

University College (ENGCC): Penn State Brandywine, Penn State Greater Allegheny, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York
University Park, College of the Liberal Arts (ENGL)

PROFESSOR Mark Morrisson, *Department Head*

Majors explore the imaginative and practical uses of English through courses in literature, writing, rhetoric, and language. They develop perspectives on human nature and cultural values through American, British, and other English literatures; they learn how to gather, analyze, synthesize, and communicate information; they gain mastery over their language. These skills help English majors find careers in such fields as publishing, business, industry, government, and teaching. English majors often go on to postgraduate study not only in English but in such areas as law, business, education, or other liberal disciplines.

Majors can emphasize writing, literature, or rhetoric, or a mix of literature, writing, and rhetoric. All provide a liberal education and all develop analytic and writing skills. Qualified students may participate in the career internship and in the English honors program.

Students interested in earning certification in secondary education should contact the College of Education, Department of Curriculum and Instruction. (See also Teacher Education Programs.)

For the B.A. degree in English, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in front of *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 36 credits [\[1\]](#)

ADDITIONAL COURSES (18 credits)

Select 3 credits from ENGL 200(3) or ENGL 201 GH(3) (Sem: 1-6)

Select 3 credits of a 300/400-level course in each of the following areas:

Medieval through Sixteenth Century (Sem: 1-8)

Sixteenth Century through Eighteenth Century (Sem: 1-8)

The Nineteenth Century (Sem: 1-8)

Twentieth Century to the Present (Sem: 1-8)

Select 3 credits from ENGL 494H(3) or ENGL 487W(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

In consultation with adviser, select 18 credits in literature, writing, or rhetoric (Sem: 1-8)

(At least 9 credits must be at the 300/400 level)

At least 3 of the 300/400 level credits must fulfill a departmental diversity requirement for a course related to race, gender, sexuality, disability, ethnicity, and/or postcolonial issues).

Integrated B.A./M.A. Program in English

The BA in English requires a minimum of 123 credits, with 36 of those credits required for the English major-3 credits of English 200, 3 credits of English 201, 3 credits of English 221, 18 credits of English 300 level or above, 3 credits of pre-1800 300 level or above, 3 credits of post-1800 race, ethnic, or minority literatures 300 level or above, 3 credits of English 487W, senior seminar.

The B.A./M.A. consists of these 36 English credits of the B.A., plus an additional 24 English credits of M.A. work distributed as follows: 12 credits of English 512, 513, or 515. English 512, 513, and 515 can be repeated for credit. In addition, students will take 6 credits of a graduate-level literature and 6 credits of M.A. Master's paper, 596, to support work on a major project that will be the centerpiece of each student's culminating Master's paper. In the Master's paper, students receiving an M.A. in English with a creative writing concentration will append their Master's paper with a bibliographic essay referencing primary and/or secondary sources generated by their research for the paper. The essay can discuss the range of research modalities, including contextual background in the work itself as well as contemporary and historic literature that has influenced the style and form of the Master's paper. Sources consulted for contextual background can include library and database materials, historical research, oral history, interviews, and other bibliographic tools. 12 credits, 6 at the 400 level (412/413/415) and 6 at the 500 level (512/513/515), will be double counted between the B.A. and the M.A. The IUG B.A./M.A. consists of a total of 60 English credits.

A minimum of 141 credits are required to complete the IUG B.A./M.A. in English.

Time of Admission to the Program

Students shall be admitted to the English IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study.

Application to the English IUG would typically occur in the junior year after a student has completed 60 credits, enrolled in the English major, and completed two English courses in creative writing.

Admission Requirements

Admission to the integrated B.A./M.A. program will be based on the submission of a portfolio of creative work and a plan of study to the department's Director of Graduate Studies and the Director of the B.A./M.A. program. Applications typically will be filed during the 5th or 6th semesters of study, and applicants must have achieved a minimum of 60 credits and a 3.3 overall GPA and 3.6 GPA in English to begin the program. The English Director of Graduate Studies will ensure that the applicant meets the minimum credit and GPA requirements for the program. The Director of the B.A./M.A. program will evaluate

the quality of the student's creative work and the applicant's plan for fulfilling the requirements of the M.A. in English. The Director of the B.A./M.A. program, in consultation with the Creative Writing faculty, will have final approval for what constitutes an acceptable level of creative work and an acceptable plan for the completion of the M.A.

The application procedure requires submission of the following:

- A. Support Letters from Faculty and Administrators (addressed to the department's Director of Graduate Studies and the Director of the B.A./M.A. program)
- B. A Personal Statement
- C. Portfolio of Creative Work
- D. A Plan of Study
- E. A transcript and degree audit printed from e-Lion
- F. A current resume or curriculum vita
- G. A copy of the completed on-line Graduate School Application (GRE scores are not required).

Plan of Study and Advising

Prior to the application process, students should communicate their intent to enroll in the IUG to the English B.A. adviser and the Director of the B.A./M.A. program. The Director of the B.A./M.A. will help each student identify an appropriate series of English courses to properly prepare each student for the 500-level M.A. workshops and 500-level literature courses.

Students will be expected to maintain a minimum overall GPA of 3.3 for all undergraduate coursework and a GPA of 3.6 in English (ENGL) courses throughout the IUG program of study. Failure to do so will result in the student being advised that he/she must regain a GPA of 3.3 within one semester. If the GPA is not 3.3 or higher in general undergraduate coursework and 3.6 or higher in English coursework after that term, the student will be dropped from the IUG.

Each student enrolled in the B.A./M.A. will meet at the beginning of each term with the Director of the B.A./M.A. to discuss his or her progress through the M.A. degree and to make sure that he or she is following the plan established upon his or her admission to the B.A./M.A. program.

If the student decides not to continue on in the IUG, the student may, contingent on fulfilling all other requirements for the BA in English, graduate with a B.A. in English.

Sequence of Courses

The IUG B.A./M.A. consists of a total of 60 English credits. A minimum of 141 credits are required to complete the IUG B.A./M.A. in English.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-106

Review Date: 8/23/2016

[Comments](#)

LA

Environmental Studies

Altoona College (ENVBS)

Professor Darin Zimmerman, *Head*

This interdisciplinary major is designed to provide students with an integrated and critical knowledge of the natural environment and human interactions with it. Students will receive a strong foundation in the natural and physical sciences, but will extend their studies across several disciplines, emphasizing both public policy issues and the role of the natural environment in literature, history, and culture. The goal of the program is "ecological literacy," which means that students will develop a broad-based understanding and awareness of environments and environmental issues, and they will develop the problem-solving and technical skills to address those issues. Program requirements include interdisciplinary courses in environmental studies and a broad array of courses in biology, geology, chemistry, physics, geography, economics, political science, English, history, and philosophy. By selecting appropriate electives to supplement the "additional courses" requirement of the major, students may develop an emphasis in either a specific field (i.e., biology) or in a general area of study (natural science, social science, and humanities).

The B.S. in Environmental Studies will better prepare our graduates for graduate studies and/or employment in the sciences (e.g., ecology, geosciences, environmental sciences, and physical geography). Many graduate programs require at least one semester of calculus, chemistry, and physics. Furthermore, the requirements of additional 400-level courses in the sciences will permit students to target their undergraduate studies in a particular area of science so that they are best prepared for graduate work in their area of choice and/or employment.

Entrance to Major Requirements:

For entrance into the Environmental Studies B.S. program, students must have completed the following course ENVST 100(3) and have received a grade of C or better in the course.

For the B.S. degree in Environmental Studies, a minimum of 121 credits is required.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selections or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 12 credits

REQUIREMENTS FOR THE MAJOR: 88-90 credits

(This includes 24 credits of General Education courses as follows: 3 credits of GH courses; 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (56 credits)

BIOL 110 GN(4) [\[1\]](#), BIOL 220W GN(4) [\[1\]](#), CHEM 20(3) [\[1\]](#), CHEM 21(1) [\[1\]](#), ENGL 180 GH(3) [\[1\]](#), ENVST 100 GS(3) [\[1\]](#) (Sem: 1-2)
CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), ENVST 200(3) [\[1\]](#), GEOSC 1(3) [\[1\]](#), PHYS 250 GN(4) [\[1\]](#), SOILS 101 GN(3) [\[1\]](#) (Sem: 3-4)
CHEM 202(3) [\[1\]](#), ECON 428(3) [\[1\]](#), GEOG 115 GN(3) [\[1\]](#), GEOG 160 GS(3) [\[1\]](#), HIST 453(3) [\[1\]](#), PHIL 403(3) [\[1\]](#) (Sem: 5-6)
ENVST 400(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (20-22 credits)

ECON 102 GS(3) [\[1\]](#) or ECON 104 GS(3) [\[1\]](#) (Sem: 1-2)
MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#) (Sem: 3-4)
BIOL 222(3) [\[1\]](#) or BIOL 230W GN(4) [\[1\]](#) or BIOL 240W GN(4) [\[1\]](#) (Sem: 3-4)
PLSC 135 GS(3) [\[1\]](#) or PLSC 425(3) [\[1\]](#) (Sem: 5-6)
STAT 200 GQ(4) [\[1\]](#) or STAT 250 GQ(3) [\[1\]](#) (Sem: 3-6)
Select ENVST 395(3) [\[1\]](#) and INTSP 370(1) [\[1\]](#); or ENVST 496(4) [\[1\]](#); or ENVST 296(1) [\[1\]](#) and ENVST 496(3) [\[1\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from the three departmental lists (6 in natural science department list, 3 in social science department list, and 3 in arts and humanities department list in consultation with an academic adviser.)
At least nine credits must be at the 400-level.

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-014

Review Date: 04/09/2013

Environmental Science

Penn State Erie, The Behrend College (ENVSC)

A.M. FOYLE, *in charge*

The B.S. in Environmental Science (ENVSC) employs the principles, processes, and methodologies of the life and physical sciences to develop an integrated understanding of the environment and the effects associated with human use of the Earth's natural resources. Students will work in interdisciplinary teams in a capstone course and in environmental research/internship projects attuned to Great Lakes, water resources, and energy resources issues. Students choosing the Environmental Field Science option will obtain additional strengths in field biology, geographic information systems, and environmental geoscience and field methods. Those choosing the Environmental Lab Science option will obtain additional strengths in analytical chemistry and environmental geochemistry. The curriculum permits additional specialization in allied areas through completion of minors in chemistry, biology, or statistics.

For the B.S. degree in Environmental Science, a minimum of 121 credits is required, with at least 15 credits at the 400 level. Each student must earn at least a grade of C in each 300- and 400-level prescribed, additional, and supporting course.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES 0-1 credits

REQUIREMENTS FOR THE MAJOR: 102-103 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GH courses; 3 credits of GWS courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 69-70 credits

PRESCRIBED COURSES (40 credits)

BIOL 110 GN(4)[1], BIOL 220W GN(4), CHEM 110 GN(3)[1], CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4)[1] (Sem: 1-2)
CHEM 202(3), ENGL 202C GWS(3), GEOG 160 GS(3), GEOG 161(1), MATH 141 GQ(4) (Sem: 3-4)
BIOL 402(3), ENVSC 400W(3) (Sem: 5-8)

ADDITIONAL COURSES (23-24 credits)

CIVCM 211 GS(3) or SUST 200 GS(3) or PLSC 1 GS(3) (Sem: 1-2)
SCM 200 GQ(4) or STAT 200 GQ(4) or STAT 250 GQ(3) (Sem: 3-4)
EARTH 2 GN(3) or GEOG 10 GN(3) or GEOSC 1(3) (Sem: 3-5)
PHIL 103 GH(3) or PHIL 119 GH(3) or PHIL 132 GH(3) or STS 245 GS;IL(3) (Sem: 4-5)
PHYS 211 GN(4)[1] and PHYS 212 GN(4); or PHYS 250 GN(4)[1] and PHYS 251 GN(4) (Sem: 5-6)
ECON 102 GS(3) or ECON 104 GS(3) or GEOG 30N GS(3) or GEOG 126 GS(3) (Sem: 6-7)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 3 credits from BIOL, ENVSC, GEOG, GEOSC 494M (Research), 495 (Internship), or 496 (Independent Studies) (consult with advisor)[81] (Sem: 5-6)
Select 3 credits from the Natural & Physical Sciences program list[81] (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 33 credits

ENVIRONMENTAL FIELD SCIENCE OPTION: (33 credits)

PRESCRIBED COURSES (12 credits)

BIOL 435(3), GEOG 363(3), GEOSC 303(3), GEOSC 452(3) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)

CHEM 301(3) or EGEE 101 GN(3) or STS 420(3) (Sem: 5-6)
GEOSC 451(3) or GEOSC 454(3) (Sem: 7-8)
Select 3 credits from any Biology 400-level field/lab course [1] or GEOSC 412(3) or GEOSC 418(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits) [81]

Choose 12 credits from the Natural & Physical Sciences and/or the Social Sciences, Arts & Humanities program lists with not more than 6 credits from the latter list. (Students may apply 6 credits of basic ROTC.) (Sem: 4-8)

ENVIRONMENTAL LAB SCIENCE OPTION: (33 credits)

PRESCRIBED COURSES (15 credits)

MICRB 201(3), MICRB 202(2) (Sem: 4-6)
CHEM 203(3), CHEM 221(4), CHEM 301(3)[1] (Sem: 5-7)

ADDITIONAL COURSES (6 credits)

GEOSC 412(3) or GEOSC 418(3) or GEOSC 419(3) (Sem: 6-7)
GEOSC 451(3) or GEOSC 452(3) or STS 420(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits) [81]

Choose 9 credits from the Natural & Physical Sciences and/or the Social Sciences, Arts & Humanities program lists with not more than 6 credits from the latter list. (Students may apply 6 credits of basic ROTC.) (Sem: 4-8)

Choose 3 credits at the 400-level from the Natural & Physical Sciences program list.(Sem 7-8)

[1] A student enrolled in this major must receive a grade of C or better in this course, as specified in Senate Policy 82-44.

[81] A maximum of 9 credits of Research (494), Internship (495), or Independent Study (496) may be applied toward credits for graduation in all options.

Lastest Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-016

Review Date: 04/08/2014

Environmental Systems Engineering

University Park, College of Earth and Mineral Sciences (ENVSE)

PROFESSOR WILLIAM GROVES, Undergraduate Program Officer

It is an interdisciplinary program with two options. One option is Environmental Systems Engineering and it is concerned with the impact of industrial activities on the environment and the choice of cost-effective remediation strategies. The other option is Environmental Health and Safety Engineering and it is concerned with safe and healthful design of industrial systems such that workers are protected from potentially high risk exposures associated with today's industries. The program is unique as it is designed to address critical environmental, safety and health problems of the basic industries such as those involved in the extraction, conversion, and utilization of energy and mineral resources. The courses are sequenced so that students acquire an appropriate blend of theory, applications, and design and are equipped with the fundamentals necessary to maintain lifelong professional growth. Graduates are prepared to enter both the private and public sectors as environmental systems engineers or health and safety engineers or to pursue further education at the graduate level.

During the first two years, the program shares many common features (e.g., mathematics, chemistry, physics, and engineering mechanics) with other more traditional engineering disciplines. Students then take a series of special courses that introduce engineering concepts in the extractive and process industries. Process engineering and a variety of solid-solid, solid-fluid, and fluid-fluid separations play a major and often dominant role in the prevention and/or remediation of environmental damage or the prevention of health and safety hazards resulting from industrial activity. Students then specialize in the particular problems associated with air, land, or water, environmental health and safety engineering or select a hybrid program. Specialization is accomplished through a combination of additional designated courses and selection from an extensive list of relevant elective courses. The curriculum is structured so as to integrate design concepts into the various subject areas covered in the program.

The human, societal, economic, ethical, and regulatory aspects of the industrial impact on the environment and on the workers themselves are addressed through a combination of specific courses and components of other more general courses. This aspect of the program is designed to provide students with a deeper understanding, both of the impact of environmental degradation on society and of the effects on industrial activity of society's demands for protection of workers and the environment. The program culminates with the capstone design course, which is an integrated, problem-based, multi-faceted project in which students, working in a team setting, utilize fundamental concepts to design an environmental remediation system or an environmental health and safety protection system (or incorporate these design requirements into other associated designs).

The integration of knowledge and skills acquired during the course of study in the Environmental Systems Engineering program provides graduates with the following student outcomes:

- An ability to apply knowledge of mathematics, science, and engineering
- An ability to design and conduct experiments, as well as to analyze and interpret data
- An ability to design a system, component, or process to meet desired needs
- An ability to function on multi-disciplinary teams
- An ability to identify, formulate, and solve engineering problems
- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- The broad education necessary to understand the impact of engineering solutions in a global and societal context
- A recognition of the need for and an ability to engage in life-long learning
- A knowledge of contemporary issues
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- An ability to integrate knowledge and minimize environmental impacts in resource recovery and the process industries

Environmental Systems Engineering Program Educational Objectives:

Our graduates will

- Enter the private or public sectors as environmental systems engineers to solve a broad range of environmental or health and safety problems associated with the resource recovery and general and process industries or pursue an advanced degree.
- Address critical environmental or health and safety problems of the basic industries, especially those involved with the extraction, conversion, and utilization of energy and mineral resources; design effective and economic engineering systems to alleviate such problems, individually and in a team setting; and communicate the results effectively.
- Determine the impact of environmental pollution control on the viability of industrial operations, including health and safety, social, and ethical aspects, and an awareness of environmental regulations; evaluate novel strategies for minimizing pollution control costs in the process industries.
- Recognize the need to maintain professional competency and the value of life-long learning.

Entrance to Major Requirements:

In addition to the minimum grade point average (GPA) requirements described in the University Policies, the Environmental Systems Engineering entrance-to-major requirement must also be completed with a minimum grade of C: MATH 140 GQ(4), MATH 141 GQ(4), PHYS 211 GN(4), and CHEM 110 GN(3).

Integrated B.S. in Environmental Systems Engineering (ENVSE) and M.S. in Energy and Mineral Engineering (EME)

The integrated undergraduate-graduate (IUG) program between the environmental systems engineering undergraduate program and the energy and mineral engineering graduate program enables academically superior and research-focused ENVSE undergraduate students to also obtain an M.S. degree in Energy and Mineral Engineering in five years of study. Students should refer to the Energy and Mineral Engineering graduate program in the Graduate Program Bulletin for the IUG admission and degree requirements.
(http://bulletins.psu.edu/bulletins/whitebook/graduate_degree_programs.cfm?letter=E&program=grad_eme.htm)

For the B.S. in Environmental Systems Engineering, a minimum of 131 credits is required. This baccalaureate program in Environmental Systems Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 113-114 credits

(This includes 27 credits of General Education courses: 9 credits of GWS courses; 6 credits of GQ courses; 9 credits of GN courses; 3 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 97-98 credits

PRESCRIBED COURSES (80 credits)

EMSC 100S GWS(3) [171](#) (Sem: 1-2)

CHEM 110 GN(3) [111](#), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 202(3), EMCH 211(3), EMCH 212(3), MATH 140 GQ(4) [111](#), MATH 141 GQ(4) [111](#), MATH 251(4),

PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 1-4)
 CE 370(3) [11], EME 301(3) [11], EME 303(3) [11] (Sem: 3-6)
 ENGL 202C GWS(3) [11], GEOSC 452(3), MNPR 301(3) [11] (Sem: 5-6)
 EME 460(3), ENVSE 404(3), ENVSE 406(3), ENVSE 427(3) [11], ENVSE 450(3), ENVSE 470(3), ENVSE 480(3), MNG 401(1), PNG 411(1) (Sem: 5-8)

ADDITIONAL COURSES (11-12 credits)

ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
 CMPSC 201 GQ(3) or CMPSC 202 GQ(3), or CMPSC 203 GQ(4) (Sem: 3-4)
 MATH 220 GQ(2) or MATH 231(2) (Sem: 3-4)
 GEOSC 1(3) [11] or GEOSC 71(3) [11] (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in consultation with adviser (Sem: 7-8) [2]

REQUIREMENTS FOR THE OPTION: 16 credits**ENVIRONMENTAL SYSTEMS ENGINEERING OPTION:** (16 credits)**PRESCRIBED COURSES** (10 credits)

GEOG 30N GS;IL(3), MICRB 106 GN(3) (Sem: 1-4)
 EGEE 470(3), ENVSE 412(1) (Sem: 5-6)

ADDITIONAL COURSES (6 credits)

ENVSE 408(3), SOILS 401(3), or METEO 455(3) (Sem: 7-8)
 METEO 454(3), MNPR 401(3), or MNPR 426(3) (Sem: 7-8)

ENVIRONMENTAL HEALTH AND SAFETY ENGINEERING OPTION: (16 credits)**PRESCRIBED COURSES** (16 credits)

BIOL 141 GN(3), PSYCH 100 GS(3) (Sem: 1-4)
 ENVSE 440(3) (Sem: 5-6)
 ENVSE 400(3), ENVSE 457(3), ENVSE 458(1) (Sem: 7-8)

Integrated B.S. in Environmental Systems Engineering (ENVSE) and M.S. in Energy and Mineral Engineering (EME) Course Substitutions

As many as twelve of the credits required for the master's degree may be applied to both the B.S. and M.S. degrees. A minimum of six credits counted for both the B.S. and M.S. degrees must be at the 500-level. Thesis and culminating/capstone experience credits may not be double counted. The undergraduate degree program officer will determine the specific undergraduate required courses for which the 500-level courses may be used to substitute to meet institutional and accreditation requirements.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] Students who complete Basic ROTC may substitute 6 credits of ROTC for 3 credits of GHA courses and 3 credits of Supporting Courses and Related Areas.

[188] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS can be substituted for EMSC 100S GWS.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-042A

Review Date: 1/10/2017

UCA Revision #1: 8/4/06

UCA Revision #2: 7/27/07

EM

Environmental Studies

Altoona College (ENVBA)

PROFESSOR DARIN ZIMMERMAN, *Head*

This interdisciplinary major is designed to provide students with an integrated and critical knowledge of the natural environment and human interactions with it. Students will receive a strong foundation in the natural sciences but will extend their studies across several disciplines, emphasizing both public policy issues and the role of the natural environment in history and culture. The goal of the program is "ecological literacy," which means that students will develop a broad-based understanding and awareness of environments and environmental issues, and they will develop the problem-solving skills to address those issues. Program requirements include interdisciplinary courses in environmental studies and a broad array of courses in biology, geology, chemistry, geography, economics, political science, English, history, and philosophy. By selecting appropriate electives to supplement the "additional courses" requirement of the major, students may develop an emphasis in either a specific field (i.e., biology, English) or in a general area of study (natural science, social science, and humanities). Graduates are equipped for employment as environmental consultants in business or with governmental agencies and public interest groups. Many may go on to postgraduate study in environmental science, public policy, or the humanities, or to law school.

A student wishing to transfer into the Environmental Studies program must have completed the following course ENVST 100(3) and have received a grade of C or better in the course.

For the B.A. degree in Environmental Studies, a minimum of 120 credits is required.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selections or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 10-11 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 64-65 credits [\[1\]](#)

(This includes 21 credits of General Education courses as follows: 3 credits of GH courses; 9 credits of GN courses; 3 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (39 credits)

BIOL 110 GN(4), BIOL 220W GN(4), ENVST 100(3), ENGL 180 GH(3), GEOSC 1(3) (Sem: 1-2)

CHEM 20(3), CHEM 21(1), ENVST 200(3), GEOG 115 GN(3) (Sem: 3-4)

ECON 428(3), GEOG 160 GS(3), PHIL 403(3) (Sem: 5-6)

ENVST 400(3) (Sem: 7-8)

ADDITIONAL COURSES (16-17 credits)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-2)

PLSC 135 GS(3) or PLSC 425(3) (Sem: 5-6)

STAT 200 GQ(4) or STAT 250 GQ(3) (Sem: 5-8)

GEOG 407(3) or HIST 453(3) (Sem: 7-8)

Select ENVST 395(1-18) and INTSP 370(1); or ENVST 496(4); or ENVST 296(1) and ENVST 496(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits (3 in each departmental list) in consultation with an academic adviser.

At least six credits must be at the 400-level. (Sem: 3-8)

a. Natural Sciences

b. Social Sciences

c. Arts and Humanities

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-06-006

Review Date: 04/10/2012

UCA Revision #1: 8/4/06

UCA Revision #2: 7/27/07

AL

Publications updated head: 3/21/11

Education and Public Policy

University Park, College of Education (EPP)

PROFESSOR DANA MITRA, *In charge*

The Education and Public Policy major (EPP) offers an interdisciplinary program for mission-driven students who want to make a difference in society by building democratic participation and improving civic capacity in and through educational institutions and communities.

The EPP major prepares students to work in political and economic global systems for the betterment of a diverse and democratic society. EPP students become discerning research consumers and policy analysts in order to work for educational reform and social justice. The EPP major blends core courses in educational policy with foundations courses in sociology, political science, economics, business, race and class, and research methods. Elective courses within the major include policy problems, public systems, leadership, ethics, diversity, equality, and equity. In addition to academic studies, the EPP major includes a semester field experience culminating in a real-world, meaningful research project. Opportunities for internships include organizations in State College, Harrisburg, Philadelphia, and Washington, D.C. Graduates of the EPP program will enter professional careers in educational organizations, government, community development, public service, non-profits, consulting, philanthropy, and interest groups.

Baccalaureate degree candidates must have a minimum 2.0 GPA by the end of their fourth semester to be admitted to the Education and Public Policy (EPP) major; thereafter, students must earn a C or better in all prescribed and required courses necessary for the major.

For the B.S. degree in Education and Public Policy, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: (45 credits)

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR. See description of General Education in the *Bulletin*.)

FIRST-YEAR SEMINAR

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 0-1 credits

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 87-88 credits

(This includes 12 credits of General Education courses: 6 credits of GS courses; 3 credits of GQ courses; and 3 credits of GH courses.)

PRESCRIBED COURSES (36 credits)

PLSC 1 GS(3), PLSC 3 GS(3), ECON 102 GS(3), ECON 104 GS(3), EDTHP 115 US(3), HIST 21 GH;US(3), SOC 5 GS(3) (Sem: 1-4)
CAS 222/CIVCM 211 GS;US(3), EDTHP 200 GS(3), EDTHP 420(3) (Sem: 3-6)
EDTHP 394(3) (Sem: 5-6)
EDTHP 395(3) (Sem: 7-8)

ADDITIONAL COURSES (9-10 credits)

EDPSY 101 GQ(3), STAT 100 GQ(3) [\[1\]](#) or STAT 200 GQ(4) [\[1\]](#) (Sem: 1-3)
SOC 1 GS(3) [\[1\]](#) or RSOC 11 GS;US(3) [\[1\]](#) (Sem: 1-3)
EDPSY 400(3), EDPSY 406(3), SOC 23 GS(3), SOC 207(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (42 credits)

Select 9 credits of Educational Theory and Policy Studies at the 400 level (Sem: 3-8)
Select 15 credits of Policy Problems and Public Systems from approved department list (Sem: 3-8) [\[1\]](#)
Select 6 credits of Leadership and Citizenship from approved department list (Sem: 3-8) [\[1\]](#)
Select 6 credits of Diversity and Equity from approved department list (Sem: 3-8) [\[1\]](#)
Select 6 credits of Major-related courses in consultation with EDTHP adviser. (Sem: 3-8)

A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-038

Review Date: 04/09/2013

ED

Energy and Sustainability Policy

University Park, College of Earth and Mineral Sciences offered via the World Campus

VERA COLE, Program Officer

The Bachelor of Arts degree in Energy and Sustainability Policy (ESP) is an interdisciplinary program, preparing students for careers in the evolving policy sector of the energy and sustainability fields. ESP will help students achieve five broad educational objectives: (1) energy industry knowledge; (2) a sustainability ethic; (3) analytical skills; (4) communication skills; and (5) global perspective. Graduates will be prepared to act as agents for stakeholders, facilitating communication, design, and planning between the executive wing and operations wing of organizations, including commercial firms, NGOs, and governmental bodies. The online program serves a national market of adult learners who need to participate part-time and at a distance.

For the B.A. degree in Energy and Sustainability Policy a minimum of 120 credits is required.

Scheduling recommendation by semester standing given as (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(25 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR). (See description of General Education in this bulletin)

FIRST-YEAR SEMINAR: 1 credit

Undergraduate programs delivered through the World Campus are exempt from the FYS requirement. However, the B.A. in ESP program will require a comparable 1-credit Program Orientation course (EM SC 302) that introduces students to program objectives and advising resources.

UNITED STATES CULTURES AND INTERNATIONAL CULTURES: (Included in GENERAL EDUCATION course selections or REQUIREMENTS FOR THE MAJOR.)

WRITING ACROSS THE CURRICULUM: (Included in the REQUIREMENTS FOR THE MAJOR.)

BACHELOR OF ARTS REQUIREMENTS: 24 credits

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

ELECTIVES: 8

REQUIREMENTS FOR THE MAJOR: 68 credits

(This includes 25 credits of General Education Courses: 6 credits of GN courses, 9 credits of GWS courses, 4 credits of GQ courses, and 6 credits of GS courses.)

PRESCRIBED COURSES: 62 credits

CAS 100 GWS(3), EBF 200 GS(3) [\[1\]](#), ECON 102 GS(3), ECON 104 GS(3), EGEE 102 GN(3) [\[1\]](#), EGEE 120 GS;US;IL(3), EGEE 401(3), EMSC 240(3), EMSC 302(1) [\[1\]](#) (Sem: 1)

METEO 469(3) [\[1\]](#), PLSC 1 GS(3) (Sem: 1-2)

STAT 200 GQ(4) [\[1\]](#) (Sem: 3-4)

EME 444(3) [\[1\]](#), EME 466(3) [\[1\]](#), ENGL 015 GWS(3), ENGL 202D GWS(3), GEOG 30N GS;IL(3) [\[1\]](#) (Sem: 5)

GEOG 432(3) [\[1\]](#), GEOG 469(3) [\[1\]](#) (Sem: 6)

PLSC 490(3) [\[1\]](#) (Sem: 7)

GEOG 438W(3) [\[1\]](#) (Sem: 8)

ADDITIONAL COURSES: 6 credits

METEO 3 GN(3) or METEO 101 GN(3) (Sem: 5)

EGEE 299 IL(3) or EGEE 495(3) (Sem: 8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-033C

Review Date: 4/5/2016

Energy and Sustainability Policy

University Park, College of Earth and Mineral Sciences *offered via the World Campus* (ESPBS)

The Bachelor of Science degree in Energy and Sustainability Policy (ESP) is an interdisciplinary program, preparing students for careers in the evolving policy sector of the energy and sustainability fields, especially where strong science, business, and analytical skills are required. The B.S. program prescribes coursework in areas including energy sources, uses, and technologies; sustainability principles and practices; climate change; and, policy development and analysis. Students select additional courses in energy and science; analysis and technology; business and management; and, ethics, leadership and communications. ESP B.S. educational objectives emphasize five areas of student competency: (1) energy industry knowledge; (2) a sustainability ethic; (3) analytical skills; (4) communication skills; and (5) global perspective. The ESP B.S. program prepares students with knowledge and skills valued by many types of organizations, including commercial firms, government agencies, public utilities, regulatory bodies, nonprofit and advocacy groups, and energy and trade organizations.

For the B.S. degree in Energy and Sustainability Policy a minimum of 120 credits is required.

Scheduling recommendation by semester standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(25 of these 45 are included in the REQUIREMENTS FOR THE MAJOR.)

(See description of General Education in the bulletin.)

FIRST-YEAR SEMINAR: 1 credit

Undergraduate programs delivered through the World Campus are exempt from the FYS requirement. However, the B.S. in ESP program requires a comparable 1-credit Program Orientation course (EMSC 302) that introduces students to program objectives and advising resources.

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selections or REQUIREMENTS FOR THE MAJOR.)

WRITING ACROSS THE CURRICULUM:

(Included in the REQUIREMENTS FOR THE MAJOR.)

ELECTIVES: 11

REQUIREMENTS FOR THE MAJOR: 89 credits

(This includes 25 credits of General Education Courses: 6 credits of GN courses, 9 credits of GWS courses, 4 credits of GQ courses, and 6 credits of GS courses.)

PRESCRIBED COURSES (62 credits)

CAS 100 GWS(3), EBF 200 GS(3) [\[1\]](#), ECON 102 GS(3), ECON 104 GS(3), EGEE 102 GN(3) [\[1\]](#), EGEE 120 GS;US;IL(3), EGEE 401(3), EMSC 240(3), EMSC 302(1) [\[1\]](#)

(Sem: 1)

METEO 469(3) [\[1\]](#), PLSC 1 GS(3) (Sem: 1-2)

STAT 200 GQ(4) [\[1\]](#) (Sem: 3-4)

ENGL 015 GWS(3), ENGL 202D GWS(3), GEOG 30N GS;IL(3) [\[1\]](#) (Sem: 5)

GEOG 469(3) [\[1\]](#) (Sem: 6)

PLSC 490(3) [\[1\]](#) (Sem: 7)

EME 444(3) [\[1\]](#), EME 466(3) [\[1\]](#) (Sem: 8)

GEOG/EME 432(3) [\[1\]](#), GEOG 438W(3) [\[1\]](#) (Sem: 8)

ADDITIONAL COURSES (6 credits)

METEO 3 GN(3) or METEO 101 GN(3) (Sem: 5)

EGEE 299 IL(3) or EGEE 495(3) (Sem: 8)

SUPPORTING COURSE AND RELATED AREAS (21 credits)

Select 6 credits in ENERGY AND SCIENCE from an approved list or in consultation with adviser.

Select 6 credits in ANALYSIS AND TECHNOLOGY from an approved list or in consultation with adviser.

Select 6 credits in BUSINESS AND MANAGEMENT from an approved list or in consultation with adviser.

Select 3 credits in ETHICS, LEADERSHIP AND COMMUNICATION from an approved list or in consultation with adviser.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Blue Sheet Item #: 44-06-034

Review Date: 4/5/2016

Food Science

University Park, College of Agricultural Sciences (FD SC)

PROFESSOR SARA R. MILILLO, Program Coordinator

Food science involves the application of science and technology to food product manufacture, storage, and distribution to consumers. Food scientists are especially concerned with food safety, nutritional values, managing food quality, food plant management, and development of new products and processes. They are employed by manufacturers and distributors of food products; by chemical, packaging, and other industries that supply goods and services; by colleges and universities in teaching and research; and by government agencies concerned with food regulations and the health and well-being of the general public.

For the B.S. degree in Food Science, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 4 credits

REQUIREMENTS FOR THE MAJOR: 89 credits

(This includes 18 credits of General Education courses; 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (62 credits)

BIOL 110 GN(4), BMB 211(3), BMB 212(1), CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3)[\[1\]](#), CHEM 113 GN(1), FDSC 200(3)[\[1\]](#), FDSC 201(1)[\[1\]](#), FDSC 400(4), FDSC 405(3), FDSC 406(3), FDSC 408(3), FDSC 409(2), FDSC 410(3), FDSC 411(3), FDSC 413(3), FDSC 414(3), FDSC 415(3), MICRB 201(3), MICRB 202([2](#)[1](#)), PHYS 250 GN(4)[\[1\]](#), STAT 250 GQ(3) (Sem: 5-6)

ADDITIONAL COURSES (13-15 credits)

CHEM 202(3)[\[1\]](#), CHEM 203(3); or CHEM 210(3)[\[1\]](#), CHEM 212(3), CHEM 213(2)

ENGL 202C GWS(3) or ENGL 202D GWS(3)

MATH 110 GQ(4) or MATH 140 GQ(4)

SUPPORTING COURSES AND RELATED AREAS (12-14 credits)

To reflect the student's career interests, select 12-14 credits (depending on the organic chem series taken, a total of 6 credits or 8 credits) from department list or in consultation with adviser (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 46-02-001

Review Date: 10/3/2017

01/19/00 (General Education information updated)

UCA Revision #1: 8/4/06

AG

PROGRAM COORDINATOR UPDATED: 9/2/14

Film-Video

University Park, College of Communications (FILM)

PROFESSOR ANTHONY OLORUNNISOLA, *Head, Department of Film-Video and Media Studies*

The Film-Video major is designed to serve students whose primary interest is the art of film and video practice. It offers an integrated curriculum in which historical, critical, and theoretical studies parallel the teaching of production and aesthetics.

The major serves students who wish to pursue careers in film, television, or related industries, as well as students planning to continue work in film and video at the graduate level.

The major includes a broad liberal arts background with introductory courses in the areas of film and video history, theory, and practice. Students have the flexibility to pursue an area of emphasis at the advanced level (narrative, alternative or documentary production).

Students must select at least 72 credits in courses outside the College of Communications.

Min. Cumulative GPA: 3.0

Minimum third semester classification

Courses required with a grade of B or better: COMM 150, COMM 242

Additional criteria:

A candidate who does not meet the minimum GPA or grade requirements may submit a portfolio during finals week of Spring semester as outlined at <http://comm.psu.edu/departments/fvms/admission-requirements>. Successful portfolio students will be admitted to the major for the following Fall provided the candidate satisfies the minimum academic requirement of at least a C (2.00) cumulative average for all courses taken at the University subject to the conditions of Section 51-50. Applicants who are not accepted into the major may re-apply the following year but must realize that this course of action could delay their graduation by at least one year.

For the B.A. degree in Film-Video, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 33 credits^[1]

PRESCRIBED COURSES (15 credits)

COMM 150 GA(3), COMM 242(3), COMM 333(3), COMM 340(3), COMM 342 WAC(3) (Sem: 2-5)

ADDITIONAL COURSES (18 credits)

Select 6 credits from COMM 337(3), COMM 338(3), COMM 339(3) (Sem: 4-6) *

Select 3 credits from COMM 437(3)*, COMM 437A(3), COMM 438(3)*, COMM 439(3)*, COMM 448(3)** (Sem: 6-10)

Select 9 credits from COMM 346(3), COMM 433(3), COMM 437(3)*, COMM 437A(3), COMM 438(3)*, COMM 439(3)*, COMM 440(3), COMM 443(3), COMM 444(3), COMM 445(3), COMM 446(3), COMM 449(3) (Sem: 7-8)

^[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

* Neither COMM 437, COMM 437A, COMM 438, nor COMM 448 may be taken concurrently.

** Admittance to COMM 448 is by permission of instructor.

Last Revised by the Department: Spring Semester 2018

Blue Sheet Item #: 46-04-020

Review Date: 1/9/2018

Department head update by Publications: 1/16/07

Publications 02/17/05

CM

Finance

University Park, Smeal College of Business (FIN)

PROFESSOR WILLIAM A. KRACAW, *Chair of the Department of Finance*

This major provides students with an opportunity to study investment analysis, management of banks and other financial institutions, and financial management of corporations and other businesses. Course coverage includes business finance, security markets, commercial bank management, investment valuations, portfolio management, futures and options markets, and capital budgeting.

Entrance Requirement: To be eligible for entrance into the Finance (FIN) major, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy requirements for entrance to the major.

Specific entrance requirements include:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4) [\[1\]](#); ECON 102 GS(3); SCM 200 GQ(4) [\[1\]](#) or STAT 200 GQ(4) [\[1\]](#); ENGL 015 GWS(3) or ENGL 030 GWS(3); and MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#); FIN 301(3) [\[1\]](#); MGMT 301(3) [\[1\]](#); and MKTG 301(3) [\[1\]](#). These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu>).

For the B.S. degree in Finance, a minimum of 120 credits is required with at least 15 credits at the 400 level.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14 credits

REQUIREMENTS FOR THE MAJOR: 73 credits

(This includes 12 credits of General Education courses: 3 credits of GWS courses; 6 credits of GQ courses; 3 credits of GS courses.)

PRESCRIBED COURSES (46 credits)

ACCTG 211(4) [\[1\]](#), ECON 102 GS(3), FIN 301(3) [\[1\]](#); MGMT 301(3) [\[1\]](#); and MKTG 301(3) [\[1\]](#) (Sem: 1-4)
BA 342(3), BA 411(3), BLAW 341(3), ECON 104 GS(3), ENGL 202D GWS(3), FIN 305W(3) [\[1\]](#), FIN 406(3) [\[1\]](#), FIN 408(3) [\[1\]](#), MIS 204(3), SCM 301(3), (Sem: 5-6)

ADDITIONAL COURSES (14 credits)

MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#) (Sem: 1-2)
SCM 200 GQ(4) [\[1\]](#) or STAT 200 GQ(4) [\[1\]](#) (Sem: 1-2)
Select 6 credits [\[1\]](#) from FIN 405(3), FIN 407(3), FIN 410(3), FIN 414(3), FIN 415, FIN 460(3) or RM 460(3), FIN 470(3) or RM 470(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (13 credits)

Select 4 credits: Attainment of 12th credit level proficiency in a single foreign language. (4 credits) Proficiency must be demonstrated by either examination or course work. (Sem: 1-4)

Select 3 credits of related coursework. See Department List. (Sem: 5-8)

Select 6 credits of supporting coursework. See Department List. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2010

Blue Sheet Item #: 38-06-040

Review Date: 04/13/2010

UCA Revision #1: 8/4/06

BA

Finance

*Penn State Abington
Capital College (FINCE)*

JANE S. KOCHANOV, *Director of Undergraduate Studies, School of Business Administration*

The finance major emphasizes analytic, problem solving, and computer skills which are necessary for finance and investment industry. The major prepares students for careers in corporate finance, investment and portfolio management, banking, public finance, and international finance. The major also prepares students who want to pursue graduate study in finance. Depending on their interests, graduates may then seek financial services credentials such as Certified Financial Planner (CFP) and Chartered Financial Analyst (CFA).

The requirements in the major complement basic business instruction in accounting, management, marketing, and information systems. With business and non-business electives, the program is designed to develop necessary skills to be an effective financial manager. Because the Harrisburg area is the center of industry and economic development for south-central Pennsylvania, students are provided with many opportunities to experience the world of business.

For a B.S. degree in Finance, a minimum of 120 credits is required. At least 50 percent of the business credit hours required for the degree must be taken at Capital College. No more than 60 credits should be from business and business-related courses.

Entry to Major Requirements:

Entry to the Finance major requires the completion of 8 entry-to-major courses: ACCTG 211(4)[\[1\]](#); ECON 102 GS(3)[\[1\]](#); ENGL 015 GWS(3) or ENGL 030 GWS(3); FIN 301(3) [\[1\]](#); MATH 110 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#); MGMT 301(3); MKTG 301(3); SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#); and a 2.00 or higher cumulative grade-point average. Additional information about this major is available in the office of the Director of Undergraduate Studies, School of Business at Penn State Harrisburg.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education Course Requirements in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: Select 8 credits of non-business courses.

REQUIREMENTS FOR THE MAJOR: 79 credits

(This includes 12 credits of General Education Courses: 3 credits of GWS courses; 3 credits of GS courses; 6 credits of GQ courses)

PRESCRIBED COURSES (49 credits)

ACCTG 211(4)[\[1\]](#); ECON 102 GS(3)[\[1\]](#); ENGL 202D GWS(3); FIN 301(3)[\[1\]](#); MGMT 301(3); MKTG 301(3) (Sem: 1-4)

ECON 104 GS(3)[\[1\]](#); ECON 351(3)[\[1\]](#); FIN 302(3)[\[1\]](#); MIS 204(3); MIS 390(3) (Sem: 5-6)

BA 364 US:IL(3); FIN 420(3)[\[1\]](#); SCM 301(3) (Sem: 6-7)

BA 462(3)[\[1\]](#); FIN 475(3)[\[1\]](#) (Sem: 8)

ADDITIONAL COURSES (21 credits)

Select 4 credits from MATH 110 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#) (Sem: 1-4)

Select 4 credits from SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#) (Sem: 1-4)

Select 4 credits from BA 243(4) or BA 241(2) and BA 242(2) (Sem: 5-6)

Select 9 credits [\[1\]](#) from the following: ACCTG 481(3); FIN 305(3); FIN 306(3); FIN 407(3); FIN 408(3); FIN 409(3); FIN 413(3); FIN 427(3); FIN 456 IL(3); FIN 461(3); FIN 489(3); FIN 496(3); or other finance courses approved by the Program (Sem: 6-8)

(For students considering CFA exam, FIN 407, FIN 427 and FIN 461 are recommended.)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from 200-400 level business courses from: ACCTG, BA, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student's interests. (Sem: 5-8)

Integrated B.S. in Finance and M.B.A. in Business Administration

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Finance candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Finance and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Finance and Master of Business Administration degrees. The total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program. Students in the IUG program take four additional credits in their third year, and four fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

Students have the choice of receiving the B.S. in Finance degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Finance degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

ADMISSION REQUIREMENTS

To initiate the application process, students must submit a resume, a personal statement including career goals and how MBA will enhance their career goals, transcripts of courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of M.B.A. Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Typical students would

apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211(4), ECON 102(3), ENGL 15 or 30(3), FIN 301(3), MATH 110 or 140(4), MGMT 301(3), MKTG 301(3) and STAT 200(4) or SCM 200(4).

To formally apply, students must submit a completed graduate school application. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admission Committee in Business Administration.

DEGREE REQUIREMENTS

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science in Finance and Master of Business Administration degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. All courses counted for both degrees must be at the 500- or 800-level.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Reviewed by the Department: Fall Semester 2017

Blue Sheet Item #:46-01-068

Review Date: 8/22/2017

UCA Revision #1: 8/4/06

UCA Revision #2: 7/27/07

[Comments](#)

CL

Finance

*Penn State Erie, The Behrend College (FNC)
Penn State World Campus*

The Finance major is a unique program that provides the student with a firm foundation in the principles of finance and its major areas: financial management, investments, and financial markets. The coursework is designed to lead to professional certification in financial analysis. Students have job opportunities in a variety of positions with mutual funds, brokerage firms, banks, and insurance companies, as well as positions in corporate finance.

The program provides students with the depth and breadth of knowledge necessary to prepare them for Level I of the Chartered Financial Analysts (CFA) Exam. The rigorous curriculum, including courses in finance, accounting, and economics, is based on the CFA Body of Knowledge developed through surveys of professionals involved in the practice of investment management. Students will be encouraged to take Level I of the CFA exam after graduation.

Entrance to Major Requirements:

Entry to the Finance major requires the completion of 5 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 015 GWS(3) or ENGL 030 GWS(3); MATH 110 GQ(4) or MATH 140 GQ(4); STAT 200 GQ(4) or SCM 200(4), and a 2.00 or higher cumulative grade-point average.

For the B.S. degree in Finance, 120-122 credits are required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 credits

REQUIREMENTS FOR THE MAJOR: 89-92 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (43 credits)

ACCTG 211(4), ECON 102 GS(3), ECON 104 GS(3), ENGL 202D GWS(3) (Sem: 3-4)
FIN 301(3) [\[1\]](#), MGMT 301(3) [\[1\]](#), MIS 204(3) [\[1\]](#), MKTG 301(3) [\[1\]](#), SCM 301(3) [\[1\]](#) (Sem: 3-6)
ACCTG 426(3) [\[1\]](#), FIN 420(3) [\[1\]](#), FIN 451(3) [\[1\]](#), FIN 471(3) [\[1\]](#) (Sem: 5-6)
MGMT 471W(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (19-22 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)
SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)
BA 241(2) and BA 242(2) or BA 243(4) (Sem: 3-6)
Select 4-7 credits from one of the following sequences: ACCTG 305(4) [\[1\]](#); or ACCTG 371(4) [\[1\]](#) and ACCTG 472(3) [\[1\]](#); or ACCTG 471(1) [\[1\]](#) and ACCTG 472(3) [\[1\]](#) (Sem: 5-6)
Select 3 credits from: ECON 304(3) [\[1\]](#), ECON 351(3) [\[1\]](#), ECON 442(3) [\[1\]](#), ECON 481(3) [\[1\]](#), or ECON 485(3) [\[1\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (27 credits)

Select 15 credits from one of the approved electives course areas (see school list of approved courses). See the Admission section of the general information in the front of this *Bulletin* for the placement policy for Penn State foreign language courses. (Sem: 1-8)
Select 6 credits [\[1\]](#) from FIN or other business areas (see school list of approved courses). (Sem: 5-8)
Select 6 additional credits [\[1\]](#) from 400-level FIN courses, excluding FIN 494 and FIN 495 (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-014

Review Date: 10/7/2014

UCA Revision #1: 8/4/06

UCA Revision #2: 7/27/07

BD

Forest Ecosystem Management

University Park, College of Agricultural Sciences (FOREM)

PROFESSOR ELLEN MANNO, Program Coordinator

The mission of the B.S. program in Forest Ecosystem Management is to help students develop the knowledge, skills, and professional ethics for understanding and managing forest ecosystems and living as responsible members of society.

The Forest Ecosystem Management major provides for the education necessary for students to pursue professional careers in one of the following options: (1) Forest Biology, (2) Forest Management, (3) Community and Urban Forest Management, and (4) Watershed Management. These options also will prepare students for graduate studies in continuing professional education.

FOREST BIOLOGY OPTION: This option provides a strong background in the biological and ecological aspects of contemporary forestry and establishes a sound foundation for professional employment and graduate-level study in forest and environmental sciences.

FOREST MANAGEMENT OPTION: This option provides professional training in the management of forest lands consistent with the needs of ownership objectives. Employment opportunities include forest management positions with public agencies, industry, and private consulting.

COMMUNITY AND URBAN FOREST MANAGEMENT OPTION: This option helps prepare students to manage community trees and green spaces. It emphasizes technical expertise, communication abilities, and skills for working with diverse people. Employment opportunities include municipalities, arboricultural companies, utilities, and government agencies.

WATERSHED MANAGEMENT OPTION: This option focuses on water resources and the integrated management of natural resources with emphasis on water. Graduates qualify for federal employment as hydrologists and for water-related careers in municipal watershed management, state and local government, and environmental/engineering consulting.

For the B.S. degree in Forest Ecosystem Management, a minimum of 120 credits is required for the Forest Biology, Forest Management, and Watershed Management options, and a minimum of 123 credits for the Community and Urban Forest Management option. Students should be aware that, in most cases, completion of the Forest Ecosystem Management degree in four years requires enrollment at the University Park Campus beginning the fall semester of the sophomore year.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(21-24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 2-11 credits

REQUIREMENTS FOR THE MAJOR: 88-100 credits
(This includes 21-24 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3-6 credits of GS courses; 0-3 credits of GA courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 33-34 credits

PRESCRIBED COURSES (27 credits)
CHEM 110 GN(3), CHEM 111 GN(1), ECON 102 GS(3) (Sem: 1-2)
FOR 200(1) [\[1\]](#), FOR 203(3) [\[1\]](#), FOR 255(3) [\[1\]](#), FOR 266(4) [\[1\]](#), SOILS 101 GN(3) (Sem: 3-4)
FOR 308(3) [\[1\]](#) (Sem: 5-6)
FOR 421(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (6-7 credits)
STAT 200 GQ(4) [\[1\]](#), STAT 240 GQ(3) [\[1\]](#), or STAT 250 GQ(3) [\[1\]](#) (Sem: 1-2)
ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 5-6)

REQUIREMENTS FOR THE OPTION: 55-66 credits

FOREST BIOLOGY OPTION: (57-58 credits)

PRESCRIBED COURSES (34 credits)
BIOL 110 GN(4), BIOL 220W GN(4) (Sem: 1-2)
CHEM 202(3) (Sem: 3-4)
FOR 204(2) [\[1\]](#), FOR 350(3) [\[1\]](#), FOR 409(2) [\[1\]](#), SOILS 102(1) (Sem: 3-6)
FOR 410(3) [\[1\]](#), FOR 430(3) [\[1\]](#), FOR 450(3) [\[1\]](#), HORT 445(3), WFS 209(3) (Sem: 5-8)

ADDITIONAL COURSES (8-9 credits)
MATH 110 GQ(4) or MATH 140 GQ(4) [\[1\]](#) (Sem: 1-2)
Select 4-5 credits from ENT 313(2), FOR 403(3), PPEM 318(2) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)
Select 15 credits from department list in consultation with adviser (Sem: 5-8)

FOREST MANAGEMENT OPTION: (56-60 credits)

PRESCRIBED COURSES (32 credits)
FOR 204(2) [\[1\]](#), FOR 320(2) [\[1\]](#), FOR 350(3) [\[1\]](#) (Sem: 3-6)
ENT 313(2), PPEM 318(2), WFS 209 GN(3) (Sem: 5-6)
FOR/WFS 430(3) [\[1\]](#), FOR 440(3) [\[1\]](#), FOR 455(3) [\[1\]](#), FOR 466(3) [\[1\]](#), FOR 470(3) [\[1\]](#), FOR 480(3) [\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (12-16 credits)
BIOL 110 GN(4) or BIOL 127 GN(3) (Sem: 1-2)
MATH 22 GQ(3) [\[1\]](#) and MATH 26 GQ(3) [\[1\]](#); or MATH 40 GQ(5) [\[1\]](#); or MATH 41 GQ(3) [\[1\]](#); or MATH 110 GQ(4) [\[1\]](#); or MATH 140 GQ(4) [\[1\]](#) (Sem: 1-2)
FOR 409(2) [\[1\]](#) and SOILS 102(1) or FOR 475(3) [\[1\]](#) (Sem: 3-8)
FOR 401(3) [\[1\]](#) or FOR 450(3) [\[1\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
In consultation with adviser, select 12 credits from department list approved for the option. Six credits must be 300-to 400-level. (Sem: 5-8)

COMMUNITY AND URBAN FOREST MANAGEMENT OPTION: (61-66 credits)

PRESCRIBED COURSES (32 credits)
PLANT 217(3), ENT 313(2), ENT 314(1), FOR 204(2), PPEM 318(2) (Sem: 3-6)
FOR 401(3) [\[1\]](#), FOR 450(3) [\[1\]](#), FOR 480(3) [\[1\]](#), GEOG 430(3), HORT 138(3), HORT 301(3), HORT 408(4) (Sem: 5-8)

ADDITIONAL COURSES (21-25 credits)

BIOL 110 GN(4) or BIOL 127 GN(3) (Sem: 1-2)

MATH 22 GQ(3) [\[1\]](#) and MATH 26 GQ(3) [\[1\]](#); or MATH 40 GQ(5) [\[1\]](#); or MATH 41 GQ(3) [\[1\]](#); or MATH 110 GQ(4) [\[1\]](#); or MATH 140 GQ(4) [\[1\]](#) (Sem: 1-2)

ARCH 316 GA(3) or LARCH 60 GA(3) or LARCH 65 GA(3) (Sem: 3-4)

FOR 409(2) [\[1\]](#) and SOILS 102(1) or FOR 475(3) [\[1\]](#) (Sem: 3-8)FOR 495(3) [\[1\]](#) or FOR 496(3) [\[1\]](#) (Sem: 5-6)

RPTM 320(3) or RPTM 325(3) or RPTM 435(3) or RPTM 470(3) (Sem: 5-6)

FOR 455(3) or GEOG 363(3) or SOILS 450(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (8-9 credits)

Select 8-9 credits from department list in consultation with adviser (Sem: 5-8)

WATERSHED MANAGEMENT OPTION: (55-59 credits)**PRESCRIBED COURSES** (7 credits)FOR 450(3) [\[1\]](#), FOR 470(3) [\[1\]](#), FOR 471(1) [\[1\]](#) (Sem: 6-8)**ADDITIONAL COURSES** (9-11 credits)MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#) (Sem: 1-2)

MATH 111 GQ(2) or MATH 141 GQ(4) (Sem: 3-4)

FOR 409(2) [\[1\]](#) and SOILS 102(1); or FOR 475(3) [\[1\]](#) (Sem: 3-8)**SUPPORTING COURSES AND RELATED AREAS** (39-41 credits)

Select 6 credits of GS social sciences from EBF 200 GS(3), ECON 302 GS(3), EGEE 211 GS(3), ENVST 100 GS(3), GEOG 20 GS(3), GEOG 30N GS(3), GEOG 130 GS(3), GEOG 160 GS(3), PLSC 1 GS(3), PLSC 135 GS(3) (Sem: 1-5)

Select 6 credits of physical sciences from EARTH 100 GN(3), EARTH 103 GN(3), EARTH 111 GN(3), GEOG 10 GN(3), GEOG 110 GN(3), GEOSC 1(3), GEOSC 10 GN(3), GEOSC 40 GN(3), METEO 3 GN(3), METEO 122 GN(3), MICRB 106 GN(3), MICRB 201(3) (Sem: 1-5)

Select 6-8 credits of GN from PHYS 1 GN(3), PHYS 150 GN(3), PHYS 151 GN(3), PHYS 211 GN(4), PHYS 213 GN(2), PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 3-4)

Select 3 credits in geospatial analysis from FOR 455(3), GEOG 362(3), GEOG 363(3), GEOG 364(3) or SOILS 450(3) (Sem: 5-6)

Select 6 credits of resources management from ASM 327(3), CED 201(3), CED 427(3), CED 429(3), CED 431(3), CED 450 IL(3), ERM 411(3), ERM 412(3), ERM 413(3), FOR 410(3), FOR 440(3), GEOG 411W(3), GEOG 430(3), GEOG 431(3), SOILS 422(3) (Sem: 5-8)

Select 9 credits from water sciences from ASM 309(3), CE 360(3), CE 370(3), CE 371(3), ERM 435(3), ERM 447(3), ERM 450(3), ENVE 411(3), ENVE 415(3), ENVSE 408(3), GEOG 310(3), GEOG 311(3), GEOG 412(3), GEOSC 412(3), GEOSC 413(3), GEOSC 440(3), GEOSC 452(3), METEO 451(3), METEO 454(3), SOILS 405(3), WFS 422(3) Three credits must be at the 400-level. (Sem: 5-8)

Select 3 additional credits at the 300-to 400-level from the lists above (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-02-002

Review Date: 10/3/2017

UCA Revision #1: 8/4/06

AG

French and Francophone Studies

University Park, College of the Liberal Arts (FR BA)

PROFESSOR BENEDICTE MONICAT, *Head*

The B.A. major in French and Francophone Studies encourages students to develop fluency in the language as well as an appreciation of francophone literature and culture. The major can also help to prepare students for interdisciplinary professional careers in which a knowledge of a foreign language is useful. At present, the B.A. major in French and Francophone Studies is available as a Language and Culture option, a Language and Linguistics option, or as a Language and Literature option.

For the B.A. degree in French, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 33 credits [\[1\]](#)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 15 credits

PRESCRIBED COURSES (6 credits)

FR 201 IL(3), FR 202 IL(3)

ADDITIONAL COURSES (9 credits)

Select 9 credits from: FR 331 IL(3), FR 332(3), FR 351 IL(3), FR 352 IL(3) (Sem: 1-6)

REQUIREMENTS FOR THE OPTION: 18 credits

LANGUAGE AND CULTURE OPTION: (18 credits)

PRESCRIBED COURSES (6 credits)

FR 402 IL(3), FR 430 IL(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 3 credits from: FR 316(3) or FR 417 IL(3) or FR 418 IL(3) or FR 419 IL(3) (Sem: 5-8)

Select 9 credits in French literature or culture at the 400 level (Sem: 5-8)

LANGUAGE AND LITERATURE OPTION: (18 credits)

ADDITIONAL COURSES (18 credits)

Select 3 credits in French linguistics from: FR 316(3) or FR 417 IL(3) or FR 418 IL(3) or FR 419 IL(3) (Sem: 5-8)

Select 15 credits in French literature at the 400 level from: FR 426Y(3) or FR 436Y(3) or FR 445Y(3) or FR 452Y(3) or FR 453Y(3) or FR 458 IL(3) or FR 460 IL(3) or FR 470 IL(3) or FR 487 IL(3) or FR 497(3) (Sem: 5-8)

LANGUAGE AND LINGUISTICS OPTION: (18 credits)

PRESCRIBED COURSES (15 credits)

FR 316(3), FR 402 IL(3), FR 417(3), FR 418(3), FR 419(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)

Select 3 credits from: LING 402(3) or LING 404(3) or LING 449(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall 2017

Blue Sheet Item #: 46-03-041

Review Date: 11/14/2017

LA

French and Francophone Studies

University Park, College of the Liberal Arts (FR BS)

PROFESSOR BENEDICTE MONICAT, *Head*

The B.S. degree is designed to allow students to combine fluency in French with other academic disciplines. The Business option develops basic skills in French (speaking, understanding, reading, writing) and acquaints students with a number of fields essential to business, especially in the international area. The Engineering option has a required overseas study or work component. The Applied French option develops basic skills in French (speaking, understanding, reading, writing) as well as a basic knowledge of French literature and culture. At the same time, it provides a concentration in a professional area in which a command of French can be particularly relevant or useful. Courses in French culture and civilization are essential to all B.S. options, and students are encouraged to participate in the University's International Studies programs in France.

For the B.S. degree in French and Francophone Studies (all options) a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(13 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 20-24 credits

REQUIREMENTS FOR THE MAJOR: 51-68 credits^[1]
(This includes 13 credits of General Education courses. For the French-Business Option, 4 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 24 credits

PRESCRIBED COURSES (12 credits)
FR 201 IL(3), FR 202 IL(3), FR 401 IL(3), FR 402 IL(3) (Sem: 3-8)

ADDITIONAL COURSES (12 credits)
Select 3 credits from: FR 316(3) or FR 417 IL(3) or FR 418 IL(3) or FR 419(3) (Sem: 5-8)
Select 9 credits from: FR 331 IL(3) or FR 332 IL(3) or FR 351 IL(3) or FR 352 IL(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 27-44 credits

FRENCH-BUSINESS OPTION: (44 credits)

PRESCRIBED COURSES (31 credits)
ACCTG 211(4), BA 301(3), BA 303(3), BA 304(3), ECON 102 GS(3), ECON 104 GS(3), ENGL 202D GWS(3), FR 409 IL(3) (Sem: 5-8)
FR 430 IL(3), IB 303 IL(3) (Sem: 1-4)

ADDITIONAL COURSES (10 credits)
Select 4 credits from: SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)
Select 3 credits from: ECON 333 GS(3) or MKTG 445 IL(3), or MGMT 461 IL(3) (Sem: 5-8)
Select 3 credits from: MKTG 220(3) or IB 403(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)
Select 3 credits in French at the 400 level (Sem: 5-8)

FRENCH-ENGINEERING OPTION: (30 credits)
(Open only to students enrolled in an engineering major.)

PRESCRIBED COURSES (6 credits)
FR 409 IL(3), FR 430 IL(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (24 credits)
Select 21 credits of engineering courses, including ENGR 295(1-3) and ENGR 395(1-3), in consultation with the engineering adviser (Sem: 3-8)
Select 3 credits in French at the 400 level (Sem: 5-8)

Note: All French-Engineering majors are required to participate in a one-semester engineering internship in France, arranged by the College of Engineering, during which up to 9 credits in French and up to 12 credits in engineering may be earned. The work experience may take the form of a professional internship (ENGR 195I) or be part of a cooperative education sequence (ENGR 295I, ENGR 395I, or ENGR 495I).

APPLIED FRENCH OPTION: (27 credits)

PRESCRIBED COURSES (3 credits)
FR 430(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (24 credits)
Select 18 credits in related areas such as Hotel, Restaurant, and Institutional Management; Linguistics; Sociology; Economics; Science, Technology and Society, or in another professional areas where competency in French is desirable. The courses are to be selected in consultation with an adviser. At least six credits of such courses must be at the 400 level. (Sem: 1-8)
Select 6 credits in French at the 400 level. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall 2017

Blue Sheet Item #: 46-03-042

Review Date: 11/14/2017

UCA Revision #1: 8/8/06

LA

Forensic Science

University Park, The Eberly College of Science (FRNSC)

Forensic Science is the application of scientific principles and methods to assist criminal and civil investigations and litigation. This major is an inter-college collaboration among academic units and provides students with a strong foundation in the biological, physical, and mathematical sciences. It introduces them to relevant topics in criminalistics forensic chemistry, forensic biology, crime scene investigation, and appropriate social sciences. Students are educated on the role of forensic scientists in the criminal justice system, the collection and analysis of scientific evidence, and the manner in which evidence is presented in court. Graduates of this major could pursue employment as a scientist in a federal, state, or private forensic laboratory or with insurance companies, homeland security agencies, or the judicial community. Graduates could also choose to pursue advanced degrees, for example, in forensic science, medicine, psychology, anthropology, pathology, odontology, entomology, toxicology, law, or in the general sciences.

In order to be eligible for entrance to the Forensic Science major, a student must have: (1) attained at least a 2.00 cumulative grade point average (2) completed CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), FRNSC 210(3), MATH 140 GQ(4), and earned a grade of C or better in each of these courses.

For the B.S in Forensic Science a minimum of 124-126 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin)

FIRST YEAR SEMINAR:
(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 97-99 credits
(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GH courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 63 credits

PRESCRIBED COURSES: (52 credits) [\[1\]](#)
CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 210(3), CHEM 212(3), CHEM 213(2), MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-4)
PHIL 132 GH(3) (Sem: 1-8)
FRNSC 100(3) (Sem: 2)
FRNSC 210(3) (Sem: 3)
FRNSC 410(2) (Sem: 4-6)
FRNSC 415(2) (Sem: 5-6)
FRNSC 411(3), FRNSC 413(3) (Sem: 5-7)
STAT 250 GQ(3) (Sem: 5-8)
FRNSC 400(1), FRNSC 475(1), FRNSC 485(4) (Sem: 7-8)

ADDITIONAL COURSES: (11 credits) [\[1\]](#)
CRIM 100 GS(3) or CRIM 113 US(3) (Sem: 1-6)
PHYS 250 GN(4), PHYS 251 GN(4); or PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 2-6)

REQUIREMENTS FOR THE OPTION: 34-36 credits

FORENSIC BIOLOGY OPTION: (36 credits)

PRESCRIBED COURSES: (21 credits) [\[1\]](#)
BMB 251(3), MICRB 201(3), MICRB 202(2) (Sem: 1-4)
BMB 400(3), BMB 401(3), BMB 442(3) (Sem: 5-7)
FRNSC 421(4) (Sem: 7-8)
ADDITIONAL COURSES: (9 credits) [\[1\]](#)
BIOL 222(3) or BIOL 322(3) (Sem: 3-5)
Select 6 credits from BMB 402(3), BMB 428(3), BMB 433(3), BIOL 405(3), BIOL 422(3), BIOL 460(3) (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)
Select 6 credits in consultation with adviser (Sem: 3-8)

FORENSIC CHEMISTRY OPTION: (34 credits)

PRESCRIBED COURSES: (19 credits) [\[1\]](#)
BIOL 110 GN(4), BIOL 230W GN(4) (Sem: 1-4)
CHEM 227(4) (Sem: 3-5)
CHEM 425W(3) (Sem: 5-7)
FRNSC 427(4) (Sem: 6-8)
ADDITIONAL COURSES: (9 credits) [\[1\]](#)
Select 9 credits from BMB 428(3), CHEM 410(3), CHEM 412(3), CHEM 423W(4), CHEM 430(3), CHEM 431W(4), CHEM 450(3), CHEM 452(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)
Select 6 credits in consultation with adviser (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-066

Review Date: 10/7/2014

UCA Revision #1: 8/4/06
UCA Revision #2: 7/27/07

SC

Engineering (G E)

Abington College

University College, Penn State Brandywine, Penn State DuBois, Penn State Hazleton

PROFESSOR SVEN BILÉN, *Head of School of Engineering, Design, Technology and Professional Programs (SEDAPP)*

PROFESSOR IVAN E. ESPARRAGOZA, *Director of Engineering Technology and Commonwealth Engineering*

PROFESSOR ROBERT AVANZATO, *Program Coordinator, Penn State Abington*

PROFESSOR ASAD AZEMI, *Program Coordinator, Penn State Brandywine*

PROFESSOR DAUDI WARYOBA, *Program Coordinator, Penn State DuBois*

PROFESSOR KATHRYN W. JABLOKOW, *Program Coordinator, Penn State Great Valley*

PROFESSOR WIESLAW GREBSKI, *Program Coordinator, Penn State Hazleton*

The Engineering program provides students with a broad foundation in engineering with specialization in a technically and professionally relevant topic. Students must choose the Multidisciplinary Engineering Design option at Abington, Brandywine and Great Valley campuses, Applied Materials option at the DuBois campus or the Alternative Energy and Power Generation option at the Hazleton campus. From this degree program, students will acquire the ability to work as members of a team toward successful attainment of a common goal, thus preparing them to work in for-profit or nonprofit organizations, or to further their studies in graduate school. Typical employment for General Engineering graduates includes positions such as engineer, product engineer, process engineer, manufacturing engineer, development engineer, and materials engineer. With employment opportunities such as these and others, graduates of the Engineering program can attain professional and economically sustaining employment in their desired regional area. This degree program develops written and oral communication skills, culminating in a two-semester senior design course sequence consisting of a project based largely on student interest and faculty input.

Program Educational Objectives:

The educational objectives of the Engineering program are designed to prepare graduates who, during the first few years of professional practice will

1. Be employed by industry or government in fields, such as design, research and development, experimentation and testing, manufacturing, and technical sales.
2. Assume an increasing level of responsibility and leadership within their respective organizations.
3. Communicate effectively and work collaboratively in multidisciplinary and multicultural work environments
4. Recognize and understand global, environmental, social, and ethical contexts of their work.
5. Progress to an advanced degree and certificate programs and be committed to lifelong learning to enhance their careers and provide flexibility in responding to changing social and technical environments.

Program Outcomes (Student Outcomes):

Graduates of the Engineering program shall be able to:

- a) Apply knowledge of mathematics, science, and engineering
- b) Design and conduct experiments, as well as to analyze and interpret data
- c) Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d) Function on multidisciplinary teams
- e) Identify, formulate, and solve engineering problems
- f) Demonstrate an understanding of professional and ethical responsibility
- g) Communicate effectively
- h) Demonstrate the understanding of the impact of engineering solutions in a global, economic, environmental, and societal context
- i) Recognize the need for, and an ability to engage in life-long learning
- j) Demonstrate knowledge of contemporary issues
- k) Use the techniques, skills, and modern engineering tools necessary for engineering practice.

In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

For the B.S. degree in Engineering, a minimum of 127 credits are required. This baccalaureate program in Engineering is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR.)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection.)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR.)

REQUIREMENTS FOR THE MAJOR: 109 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 64 credits

PRESCRIBED COURSES: 41 credits

CHEM 110 GN(3) [\[11\]](#), CHEM 111 GN(1), EDSGN 100(3), MATH 140 GQ(4) [\[11\]](#), MATH 141 GQ(4) [\[11\]](#), PHYS 211 GN(4) [\[11\]](#) (Sem: 1-2)
EMCH 211(3) [\[11\]](#), EMCH 213(3), MATH 231(2), MATH 251(4) [\[11\]](#), PHYS 212 GN(4) [\[11\]](#), PHYS 214 GN(2) (Sem: 3-4)
ENGR 490(1), ENGR 491W(3) (Sem: 7-8)

ADDITIONAL COURSES: 19 credits

Select 1 credit of First-Year Seminar (Sem:1-2)

Select 3 credits from: CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 1-2)

Select 3 credits from: ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

Select 3 credits from: CMPSC 121 GQ(3) or CMPSC 200 GQ(3) or CMPSC 201 GQ(3) (Sem: 3-4)

Select 3 credits from: ECON 102 GS(3) or ECON 104 GS(3) (Sem: 3-4)

Select 3 credits from: ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 3-4)

Select 3 credits from: ENGR 350(3) [\[11\]](#), EMCH 407(3) [\[11\]](#), or EMCH 461(3) [\[11\]](#) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS: 4 credits

Select 4 credits in General Technical Electives, in consultation with an advisor, from the program approved list.

REQUIREMENTS FOR THE OPTION: 45 credits

APPLIED MATERIALS OPTION: (45 credits)

PRESCRIBED COURSES: 42 credits

CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-2)

EMCH 212(3), ENGR 320(3), MATSE 201(3) [\[1\]](#), MATSE 400(3), MATSE 413(3), STAT 200 GQ(4) (Sem: 5-6)

ENGR 421(4), ENGR 450(3), MATSE 402(3), MATSE 411(3), MATSE 417(3), MATSE 430(3) (Sem: 7-8)

ADDITIONAL COURSES: 3 creditsME 300(3) [\[1\]](#); EME 301(3) [\[1\]](#) (Sem: 3-4)**ALTERNATIVE ENERGY AND POWER GENERATION OPTION:** (45 credits)**PRESCRIBED COURSES:** 27 credits

CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-2)

EE 210(4) [\[1\]](#) (Sem: 3-4)

EE 314(3), EGEE 302(3), EME 303(3), ME 345(4) (Sem: 5-6)

EE 485(3), EGEE 420(3) (Sem: 7-8)

ADDITIONAL COURSES: 12 creditsME 300(3) [\[1\]](#); EME 301(3) [\[1\]](#) (Sem: 3-4)

Select 9 credits from NUCE 401(3); EE 488(3); EGEE 437(3); EGEE 438(3); EGEE 441(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS 6 credits

Select 6 credits in Engineering Technical Elective courses, any 400-level courses in the College of Engineering or any 400-level courses with the Energy and Geoenvironmental Engineering (EGEE) abbreviation. Other substitutions outside the approved list must be approved by petition. (Sem: 5-8)

MULTIDISCIPLINARY ENGINEERING DESIGN OPTION (45 credits)**PRESCRIBED COURSES:** 35 creditsCMPEN 271(3), EE 210(4), EMCH 212(3) [\[1\]](#) (Sem: 3-4)EDSGN 402(4), EE 310(4) [\[1\]](#), EE 316(3) (Sem: 5-6)EDSGN 401(3), EDSGN 403(3), EDSGN 410(4) [\[1\]](#), EDSGN 495(1), ENGR 407(3) (Sem: 7-8)**ADDITIONAL COURSES** 7 credits

CHEM 112 GN(3); or any GN(3) (Sem: 1-2)

CHEM 113 GN(1); or any GN(1) (Sem: 1-2)

ME 201(3) [\[1\]](#); ME 300(3) [\[1\]](#); EME 301(3) [\[1\]](#) (Sem: 5-6)**SUPPORTING COURSES AND RELATED AREAS** 3 credits

Select 3 credits in Engineering Technical Elective courses, in consultation with an advisor, from department list (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-041

Review Date: 8/22/2017

R & T: Approved 5/24/2013

General Arts and Sciences

Penn State Erie, The Behrend College (GAS)

In this interdisciplinary major students may pursue broad interests and develop their own specialized programs when their interests are not congruent with established programs. The B.A. degree in General Arts and Sciences can be a terminal degree, or students can prepare for graduate school, professional school, or employment in business, government, or industry.

The Liberal Studies option provides the most flexible undergraduate degree program in the University except for the Bachelor of Philosophy degree. Students can use the Liberal Studies option to structure a program of study around their individual interests and career plans and can develop background in areas where Penn State Erie, The Behrend College, does not currently offer majors.

For further information and a complete list of courses, contact the head of the Division of Humanities and Social Sciences.

For the B.A. degree in General Arts and Sciences, a minimum of 124 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 19 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 12 credits

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits in each of the areas of arts, humanities, science/mathematics, and the social and behavioral sciences (Sem: 1-8)

REQUIREMENTS FOR THE OPTION: 24 credits

HUMANITIES OPTION: (24 credits)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

Select 24 credits in humanities from those listed under humanities in the Bachelor of Arts Degree Requirements list, with at least 3 credits in each of three areas, including 15 credits at the 400 level (Sem: 1-8)

LIBERAL STUDIES OPTION: (24 credits)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

(15 of these credits must be at the 400 level)

In this option, the student shall submit a proposal to the adviser listing his/her choice of subjects beyond those required in the Supporting Courses and Related Areas category. In consultation with the adviser and the General Arts and Sciences program head, the student may choose from any B.A. course offering of the University. Option must be approved no later than the end of the sixth semester. (Sem: 1-8)

SCIENCE/MATHEMATICS OPTION: (24 credits)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

Select 24 credits in science/mathematics from those listed under science/mathematics in the Bachelor of Arts Degree Requirements list, with at least 3 credits in each of three areas, including 15 credits at the 400 level (Sem: 1-8)

SOCIAL AND BEHAVIORAL SCIENCES OPTION: (24 credits)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

Select 24 credits in the social and behavioral sciences from those listed in the Bachelor of Arts Degree Requirements list, with at least 3 credits in each of three areas, including 15 credits at the 400 level (Sem: 1-8)

Last Revised by the Department: Summer Session 1988

Blue Sheet Item #: 16-08-166

Review Date: 01/30/01(Editorial changes)

BD

Graphic Design

University Park, College of Arts and Architecture (GD)

PROFESSOR KELLEANN FOSTER, Interim Professor in charge

This degree is intended to prepare students for careers in graphic design. The program includes the technical skills and the creative and intellectual capacity essential to the practices of graphic design and is intended to prepare students for employment in design studios, advertising agencies, packaging, publications and corporate design, film and television graphics, and Web and interactive design.

Acceptance into the Graphic Design major is determined by a portfolio review by faculty after the completion of GD 001S(1), GD 100 GA(3), GD 101(2), GD 102(3), and IST 110 GS(3) with grades of C or better in all of these courses. Typically, this review will take place in the second semester.

For the B. Des. degree in Graphic Design, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(3-9 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 6-12 credits

REQUIREMENTS FOR THE MAJOR: 73 credits^[1]

(This includes 3-9 credits of General Education courses: 3 credits of GS and 0-6 credits of GA courses.)

PRESCRIBED COURSES (61 credits)

GD 1S(1), GD 100 GA(3), GD 101(3), GD 102(3), IST 110 GS(3) (Sem: 1-2)

PHOTO 200(3) (Sem: 2-4)

GD 200(3), GD 201(3), GD 202(3), GD 203(3), IST 250(3), IST 256(3) (Sem: 3-4)

GD 300(4), GD 301(4), GD 302(4), GD 303(4) (Sem: 5-6)

GD 400(4), GD 402(4), GD 495(3) (Sem: 7-8)

ADDITIONAL COURSES (12 credits)

Select 6 credits from History of the Arts coursework, which may be counted toward General Education Arts requirement.

Select 6 credits from GD 297(3); GD 304(3); GD 310(3); GD 397(3); GD 401(3); GD 404(3); GD 495(3); GD 497(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring 2016

Blue Sheet Item #: 44-06-019A

Review Date: 4/5/2016

R&T Revision 4/8/2014 SCR

AA

Geography

University Park, College of Earth and Mineral Sciences (GEOBA)

PROFESSOR CYNTHIA A. BREWER, *Head*

The Department of Geography in Penn State's College of Earth and Mineral Sciences offers a strong mix of human, physical, and methodological components that comprise the core of the geography major. Combining geography with other areas of study allows students to choose from a broad range of topics in order to suit their individual interests. Undergraduate degrees in geography are offered in the Bachelor of Science (BS) and in the Bachelor of Arts (BA). Both programs offer an integrated course of study in which students learn fundamental concepts in physical and human geography while developing methodological proficiency in qualitative analysis, spatial analysis, and/or geospatial technologies.

The Bachelor of Arts (BA) major is a broader liberal-arts based program that incorporates foreign language study and courses outside the major in combination with core and elective geography courses. The BA Geography major is especially appropriate for students seeking a deeper understanding of the human experience and human-environment interactions, planning to combine their degree with concurrent majors and minors, or intending to pursue post-graduate work in geography or related disciplines.

In both the B.A. and B.S., students can customize and specialize their programs through the completion of undergraduate certificates. The Geography major can provide preparation for a career in business, industry, or government. Geographers with bachelor's degrees are currently being placed in federal, state, and local administrative and planning agencies and in private firms that specialize in planning and development or in environmental, socioeconomic, or location analysis.

Program Learning Objectives:

1. Majors in Geography will demonstrate knowledge of fundamental geographic skills and concepts and apply them to complex spatial relationships (interactions, patterns, processes) within the human socio-cultural and natural environments at global, regional, and local scales.
2. Majors in Geography will engage in spatial and environmental critical thinking by analyzing, discussion and synthesizing geographical information that may include professional/technical documents, primary data, maps, graphics, and/or archival data.
3. Majors in Geography will communicate geographic information utilizing oral, written, and visual formats to effectively process and integrate facts, ideas, and research results.
4. Majors in Geography will develop research skills by locating, understanding, and explaining geographic challenges and opportunities related to human socio-cultural and/or environmental phenomena at global, regional, and local scales.

For the B.A. degree in Geography, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(3 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 8-23 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS:

24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR:

46 credits [\[1\]](#)
(This includes 3 credits of General Education courses: 3 credits of GWS courses.)

PRESCRIBED COURSES (19 credits)

EMSC 100S GWS(3) [\[71\]](#) (Sem: 1-2) (
GEOG 210(3), GEOG 220(3), GEOG 230(3), GEOG 260(3) (Sem: 1-4)
GEOG 390(1) (Sem: 4-8)
GEOG 301(3) (Sem: 4-8)

(The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202 GWS can be substituted for EM SC 100S GWS.)

ADDITIONAL COURSES (27 credits)

Engaged Scholarship: Select 3 credits: GEOG 493(1-3); GEOG 494(1-3); GEOG 494H(1-3); GEOG 495B(1-3); GEOG 495G(1-3); GEOG 499 IL(1-3) (Sem: 5-8)

Qualitative or quantitative methods in geography: Select 3 credits: GEOG 308(3); GEOG 364(3) (Sem: 3-6) (Note: GEOG 364 has a prerequisite of STAT 200.)

300-level geography - Select 9 credits, not including courses taken above: GEOG 308(3); GEOG 310(3); GEOG 310 WAC(3); GEOG 314(3); GEOG 315(3); GEOG 320 US;IL(3); GEOG 324(3); GEOG 326(3); GEOG 328(3); GEOG 330(3); GEOG 333(3); GEOG 361(3); GEOG 362(3); GEOG 363(3); GEOG 364(3); GEOG 365(3) (Sem: 3-8)

400-level geography - Select 12 credits, not including courses taken above: GEOG 410(3); GEOG 411(3); GEOG 411W WAC(3); GEOG 412 WAC(3); GEOG 414(3); GEOG 420 US;IL;WAC(3); GEOG 421(3); GEOG 422W WAC(3); GEOG 424(3); GEOG 424W WAC(3); GEOG 425 US(3); GEOG 426Y US;IL;WAC(3); GEOG 428Y US;IL;WAC(3); GEOG 430(3); GEOG 431(3); GEOG 432(3); GEOG 433(3); GEOG 434(3); GEOG 436(3); GEOG 438W WAC(3); GEOG 439(3); GEOG 444(3); GEOG 461 WAC(3); GEOG 462(3); GEOG 463(3); GEOG 464(3); GEOG 465(3); GEOG 467(3); GEOG 481(3); GEOG 485(3); GEOG 493(1-3); GEOG 494(1-3); GEOG 495(1-3); GEOG 495B(1-3); GEOG 495G(1-3); GEOG 496(1-3); GEOG 497(1-9); GEOG 498(1-9); GEOG 499 IL(1-6) (Sem: 4-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[\[71\]](#) The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EMSC 100 GWS.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-03-013

Review Date: 11/14/2017

EM (Transferred from the College of the Liberal Arts--effective FA2006)

Geobiology

University Park, College of Earth and Mineral Sciences (GEOBI)

PROFESSOR PETER J. HEANEY, Associate Head for Undergraduate Programs

Geobiology is the interdisciplinary study of the Earth and its biosphere. It embraces the history of life and its interactions with the Earth over geologic time; it also includes study of interactions between living organisms and physical and chemical processes in the modern environment on Earth, and possibly elsewhere in the universe. Thus, geobiology encompasses the fields of paleobiology and paleontology, biogeochemistry, geomicrobiology, and astrobiology. The degree program provides students with a strong background in general science and especially in Geosciences and Biology, with core selections from both disciplines. Students gain practical field experience in the study of the physical environment and ecological properties. The senior thesis provides students with hands-on research experience, as well as an emphasis on data synthesis and the written expression of scientific observations and ideas. Students will be well prepared for advanced studies in this emerging discipline, and for careers in the environmental sciences. Geobiology is critical to the study of environmental quality, global change and environmental-human health interactions, all of which have profound importance in legal, economic, and policy arenas.

For the B.S. degree in Geobiology, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES :

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 97 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses, 6 credits of GQ courses, 6 credits of GWS courses.)

PRESCRIBED COURSES (54 credits)

BIOL 110 GN(4)[1], BIOL 220W GN(4)[1], EMSC 100S GWS(3)[71], MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-2)
CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), PHYS 211 GN(4), PHYS 213 GN(2) (Sem: 1-4)
GEOSC 1(3) [if GEOSC 1 is not available, GEOSC 20 GN(3) may be substituted] (Sem: 1-6)
GEOSC 201(4), GEOSC 204(4)[1] (Sem: 3-6)
GEOSC 310(4)[1] (Sem: 5-6)
GEOSC 494W(3), GEOSC 496(3) (Sem: 7-8)

ADDITIONAL COURSES (13-14 credits)

ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
Select 4 credits from GEOSC 202(4), GEOSC 203(4) (Sem: 3-6)
Select 3-4 credits from BIOL 230W GN(4), BIOL 240W GN(4), MICRB 201(3) (Sem: 3-6)
Select 3 credits of field experience from BIOL 444(3), GEOSC 472A(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (29-30 credits)

Select 17-18 credits, in consultation with advisor, supportive of the student's interest. (Students may apply 6 credits of ROTC) (Sem: 3-8)
Select 12 credits, at least 3 credits from each category, from the approved list of evolution, paleobiology and geology courses and biogeochemistry courses (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[71] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EMSC 100S GWS.

Last Revised by the Department: Summer Session 2007

Blue Sheet Item #: 35-01-129

Review Date: 8/29/06

UCA Revision #1: 8/8/06

Department Head Changed: 4/12/05

EM

Geography

University Park, College of Earth and Mineral Sciences (GEOBS)

PROFESSOR CYNTHIA A. BREWER, *Head*

The Department of Geography in Penn State's College of Earth and Mineral Sciences offers a strong mix of human, physical, and methodological components that comprise the core of the geography major. Combining geography with other areas of study allows students to choose from a broad range of topics in order to suit their individual interests. Undergraduate degrees in geography are offered in the Bachelor of Science (BS) and in the Bachelor of Arts (BA). Both programs offer an integrated course of study in which students learn fundamental concepts in physical and human geography while developing methodological proficiency in qualitative analysis, spatial analysis, and/or geospatial technologies.

In contrast to the broader liberal arts-oriented B.A., the Bachelor of Science (B.S.) major is a more disciplinary-focused program, emphasizing technical skills and preparation across the human/physical spectrum of geography. It includes rigorous training in the use of geographic tools and technologies as well as core and advanced courses on the ways people use environmental resources and how they arrange themselves and their economic, social, and political activities on the Earth's surface.

In both the B.S. and B.A., students can customize and specialize their programs through the completion of undergraduate certificates. The Geography major can provide preparation for a career in business, industry, or government. Geographers with bachelor's degrees are currently being placed in federal, state, and local administrative and planning agencies and in private firms that specialize in planning and development or in environmental, socioeconomic, or location analysis.

Program Learning Objectives:

1. Majors in Geography will demonstrate knowledge of fundamental geographic skills and concepts and apply them to complex spatial relationships (interactions, patterns, processes) within the human socio-cultural and natural environments at global, regional, and local scales.
2. Majors in Geography will engage in spatial and environmental critical thinking by analyzing, discussing and synthesizing geographical information that may include professional/technical documents, primary data, maps, graphics, and/or archival data.
3. Majors in Geography will communicate geographic information utilizing oral, written, and visual formats to effectively process and integrate facts, ideas, and research results.
4. Majors in Geography will develop research skills by locating, understanding, and explaining geographic challenges and opportunities related to human socio-cultural and/or environmental phenomena at global, regional, and local scales.

For the B.S. degree in Geography, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(9 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 9 credits

REQUIREMENTS FOR THE MAJOR: 75 credits

(This includes 9 credits of General Education courses: 6 credits of GQ courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (29 credits)

EMSC 100S GWS(3) [\[71\]](#) (Sem: 1-2)
GEOG 210(3), GEOG 220(3), GEOG 230(3), GEOG 260(3) (Sem: 1-4)
STAT 200 GQ(4) (Sem: 1-4)
GEOG 364(3) (Sem: 3-6)
GEOG 390(1) (Sem: 3-8)
GEOG 301(3) (Sem: 4-8)
GEOG 464(3) (Sem: 4-8)

ADDITIONAL COURSES (34 credits)

Calculus: Select 4 credits: MATH 83 GQ(4); MATH 110 GQ(4); MATH 140 GQ(4) (Sem: 1-4)

Engaged scholarship: Select 3 credits: GEOG 493(1-3); GEOG 494(1-3); GEOG 494H(1-3); GEOG 495(1-3); GEOG 495B(1-3); GEOG 495G(1-3); GEOG 499 IL(1-3) (Sem: 5-8)

Geographic Information Science skills: Select 6 credits: GEOG 361(3); GEOG 362(3); GEOG 363(3); GEOG 365(3) (Sem: 3-6)

300-level geography: Select 9 credits not taken above: GEOG 308(3); GEOG 310(3); GEOG 310W WAC(3) [\[1\]](#); GEOG 314(3); GEOG 315(3); GEOG 320 US; IL(3); GEOG 324(3); GEOG 326(3); GEOG 328(3); GEOG 330(3); GEOG 333(3)

400-level geography: Select 12 credits not taken above: GEOG 410(3); GEOG 411(3); GEOG 411W WAC(3); GEOG 412W WAC(3); GEOG 414(3); GEOG 420 US; IL; WAC(3); GEOG 421(3); GEOG 422W WAC(3); GEOG 424 US; IL(3); GEOG 424W WAC(3); GEOG 425 US(3); GEOG 426Y US; IL; WAC(3); GEOG 428Y US; IL; WAC(3); GEOG 430(3); GEOG 431(3); GEOG 432(3); GEOG 433(3); GEOG 434(3); GEOG 436(3); GEOG 438W WAC(3); GEOG 439(3); GEOG 444(3); GEOG 461 WAC(3); GEOG 462(3); GEOG 463(3); GEOG 465(3); GEOG 467(3); GEOG 481(3); GEOG 485(3); GEOG 493(1-3); GEOG 494(1-3); GEOG 494H(1-3); GEOG 495(1-3); GEOG 495B(1-3); GEOG 495G(1-3); GEOG 496(1-3); GEOG 497(1-9); GEOG 498(1-9); GEOG 499 IL(1-6) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits in geography or related areas (not used above) in consultation with advisor.

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[\[71\]](#) The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EMSC 100 GWS.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-03-014

Review Date: 11/14/2017

EM

German

University Park, College of the Liberal Arts (GERBA)

PROFESSOR B. THOMAS BEEBEE, Head

For the B.A. degree in German, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 37 credits^[1]

PRESCRIBED COURSES (15 credits)

GER 301 IL(3), GER 302(3), GER 310 IL(3), GER 344 IL(3) (Sem: 3-6)

GER 401 IL(3) (Sem: 5-8)

ADDITIONAL COURSES (22 credits)

GER 201 IL(4) or GER 208 IL(4) (Sem: 1-4)

Select 3 credits from GER 200 GH;IL(3) or German at the 100-level (Sem: 1-4)

Select 6 credits in German literature and culture from GER 420 IL(3), GER 431 IL(3), GER 432 IL(3), GER 440 IL(3), GER 472 IL(3), GER 489(3) (Sem: 5-8)

Select 3 credits in German linguistics and applied linguistics from GER 411 IL(3), GER 412 IL(3), GER 430(3) (Sem: 5-8)

Select 6 additional credits of German at the 300- or 400-level. (Sem: 5-8)

Integrated Undergraduate/Graduate (IUG) Degree Program B.A. in German and Master of International Affairs (M.I.A.)

The integrated undergraduate-graduate (IUG) degree program (B.A. in German/M.I.A. in International Affairs) provides an opportunity for strong students in these majors to complete a master's degree with 5 total years of study.

An increasingly globalized economy is likely to escalate the demand for graduate training in international affairs. The career choices for graduates with this training will also expand sharply. The integrated degree program prepares students for a variety of careers requiring an interdisciplinary background in German and international affairs. Examples of types of entities hiring in these areas are federal, state, and local governments, international organizations, multinational corporations, international banking and financial institutions, media organizations and journalism, consulting firms, policy research centers, and development assistance programs and foundations. The School of International Affairs (SIA) Master of International Affairs (M.I.A.) represents a professional degree designed to prepare students to thrive in these increasingly global career paths.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the *Graduate Bulletin*.

The number of openings in the integrated B.A./M.I.A. program is limited. Admission will be selective based on specific criteria set by the School of International Affairs. Students shall be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study. Students must be admitted to the program prior to taking the first course they intend to count towards the graduate degree. Specific requirements:

1. Must be enrolled in the German B.A. program.
2. Must apply to and be accepted into The Graduate School and the M.I.A. program in the School of International Affairs. Students must complete the [Graduate School application](#). All applicants will submit GRE scores, two letters of recommendation, and a personal statement addressing their reasons for pursuing a graduate degree in international affairs and discussing their plans and goals.
3. Although the program has no fixed minimum grade point average, an applicant is generally expected to have a minimum overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
4. Must include a plan of study identifying undergraduate credits to be applied to the M.I.A. degree elective requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
5. Must provide written endorsement from the head of Germanic and Slavic Languages and Literatures.

M.I.A. Requirements for the Integrated B.A./M.I.A.

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the *Graduate Bulletin*.

M.I.A. portion of the integrated B.A./M.I.A. will require the completion of a minimum of 42 graduate credits, at least 18 of which are from six core courses consisting of INTAF 801(3), 802(3), 803(3), 804(3), 506(3) and INTAF 590(3). The remaining credits are attained through completion of the approved elective courses. A minimum of 6 credits must be at the 500-level.

In addition to the core curriculum and elective courses, M.I.A. degree candidates must complete either: (i) a master's paper; or (ii) a supervised internship placement. If the first option is chosen and the candidate opts to complete a paper, he/she must complete 3 credits of INTAF 594. The master's paper will involve integrating and showing mastery of the subject matter of the student's curricular emphasis, and may also involve original research. If the second option is chosen, the candidate will complete 3 credits of INTAF 595. The student will participate in a supervised internship of sufficient depth and professionalism that will allow the student to experience the integration of his/her curricular studies in an actual professional environment. A reflective paper will be submitted as a part of this credit requirement.

In order to graduate, M.I.A. degree students also will need to demonstrate proficiency in a language other than English. Proficiency will be defined as follows: (i) four semesters of a Penn State language sequence or its equivalent (15 credits with a quality grade of B or better using a 4.0 scale); (ii) native acquisition, as shown by the candidate's personal history and approved by the SIA faculty; or (iii) performance on a proficiency evaluation sufficient to equal four semesters of language learning; for this purpose, either Penn State's proficiency certification process or another pre-approved proficiency assessment may be used. Language study does not provide credits towards the M.I.A. degree.

If students accepted into the IUG program are unable to complete the M.I.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

M.I.A. Degree	Integrated B.A./M.I.A. Degree
Core Courses (18)	Core Courses (18)
INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3)	INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3)
Electives (21)	Electives (21)
Course choices are from a pre-approved list in the SIA, or by SIA faculty-approved substitution.	A maximum of 12 credits may be double counted toward the B.A. and the M.I.A. The list of courses that can double count includes GER 408, GER 431, GER 432, GER 489, GER 494, GER 540, GER 581, and GER 592.
Capstone (3)	Capstone (3)
Master's Paper (INTAF 594) or Internship (INTAF 595)	Master's Paper (INTAF 594) or Internship (INTAF 595)
Total Degree Credits (42)	Total Degree Credits (42)

The list of courses that can double count includes GER 408, GER 431, GER 432, GER 489, GER 494, GER 540, GER 581, and GER 592. No more than 6 of the double-counted credits may be at the 400-level. The graduate thesis or other graduate culminating/capstone experience (including any associated credits and/or deliverables) may not be double counted towards any other degree.

Tuition Charges, Grant-in-Aid, and Assistantships

Students admitted to the School of International Affairs through the IUG with a B.A. in German may be considered to receive financial assistance. Students on graduate assistantships must adhere to the [course load limits set forth in the Graduate Bulletin](#).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-044

Review Date: 04/05/2016

LA

German

University Park, College of the Liberal Arts (GERBS)

PROFESSOR THOMAS BEEBEE, Head

The B.S. degree in German is designed to allow students to combine fluency in the German language and culture with other academic disciplines. The German-Business option develops basic German business-communication skills as well as fundamental knowledge of German economics. The German-Engineering and Applied German options have a required overseas study and internship component.

Courses in German literature and culture are essential to all German B.S. options, and students in the German-Business option are encouraged to participate in the University's study abroad programs in Germany.

For the B.S. degree in German, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-13 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 23-25 credits

REQUIREMENTS FOR THE MAJOR: 55-66 credits^[1]

(This includes 0-13 credits of General Education courses; 0-6 credits of GS courses; 0-3 credits of GWS courses; 0-4 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 22 credits

PRESCRIBED COURSES (15 credits)

GER 301 IL(3), GER 302(3), GER 310 IL(3), GER 344 IL(3) (Sem: 3-6)
GER 401 IL(3) (Sem: 5-8)

ADDITIONAL COURSES (7 credits)

Select 4 credits from: GER 201 IL(4) or GER 208 IL(4) (Sem: 1-4)

Select 3 credits from: GER 431 IL(3) or GER 432 IL(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 33-44 credits

APPLIED GERMAN OPTION: (33 credits)

This option is designed to provide German majors with a background in an area of study where knowledge of German is useful. In consultation with an advisor, majors in this option are required to either study abroad or do an internship that corresponds with their related area of study.

PRESCRIBED COURSES (9 credits)

GER 200 GH:IL(3) (Sem: 1-4)

GER 399 IL(3), GER 499 IL(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

Select 18 credits in related areas such as Hotel, Restaurant, and Institutional Management; Linguistics; Applied Linguistics; Sociology; Economics; Science, Technology and Society, or in another professional area where competency in German is desirable. The courses are to be selected in consultation with an advisor. At least six credits of such courses must be at the 400 level. (Sem: 1-8)

Select 6 credits in German at the 300 or 400 level. (Sem: 5-8)

Note: A work experience in a German-speaking country may be substituted for GER 399 or GER 499. The work experience may take the form of an internship (LA 495 or GER 495). If the number of work-experience credits for which a student registered is less than 6, the difference in the number of credits must be earned by taking additional courses in consultation with the Department of Germanic and Slavic Languages and Literatures.

GERMAN BUSINESS OPTION: (44 credits)

This option is designed to introduce German majors to the principles of business administration. The curriculum combines an exposure to managerial processes with foreign language competency in German.

PRESCRIBED COURSES (37 credits)

ACCTG 211(4), BA 301(3), BA 303(3), BA 304(3), ECON 102 GS(3), ECON 104 GS(3), IB 303 IL(3), (Sem: 3-4)
ECON 333 GS(3), ENGL 202D GWS(3), GER 308 IL(3), GER 408 IL(3), IB 403(3), (Sem: 5-8)

ADDITIONAL COURSES (7 credits)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-8)

Select an additional 3 credits of German courses at the 400 level (Sem: 5-8)

GERMAN ENGINEERING OPTION: (33 credits)

(Open only to students enrolled in an engineering major.)

This option is designed to combine the study of German and Engineering in order to internationalize and enhance the study and practice of the engineering profession.

PRESCRIBED COURSES (12 credits)

GER 308 IL(3), GER 408 IL(3) (Sem: 5-8)

GER 399 IL(3), GER 499 IL(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 21 credits of engineering courses in consultation with the engineering adviser (Sem: 3-10)

Note: The German Engineering Option is open only to Engineering majors. A work experience in a German-speaking country may be substituted for GER 399 or GER 499. The work experience may take the form of an internship (ENGR 195I) or part of a cooperative education sequence (ENGR 295I, ENGR 395I, or ENGR 495I). If the number of work-experience credits for which a student registered is less than 6, the difference in the number of credits must be earned by taking additional courses in consultation with the Department of Germanic and Slavic Languages and Literatures.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Global Studies

Berks College (GLBST)

PROFESSOR KIRWIN SHAFFER, *Program Coordinator*

This major is designed for students who are interested in a liberal arts degree with a concentration in global studies. Featuring both active and collaborative classroom experiences in addition to intensive study abroad/internship experiences, the program is designed for students who wish to develop a set of analytical and interpersonal skills that will prepare them for entry-level employment in a wide range of government and non-profit organizations and agencies and in businesses and industry. Because of the flexible and broad nature of the degree, students might also use this major as preparation for graduate or professional school in business, law, or the social sciences. This program differs most notably from traditional majors in international/global studies by requiring core courses in world literature and intercultural communication, while retaining the traditional foreign language, history, and political science emphasis of most other programs. Study abroad and an internship with an international organization are also important features of this degree.

For the B.A. degree in Global Studies, a minimum of 123 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in GENERAL EDUCATION)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 39 credits [\[1\]](#)

Including 24 credits at the 400 level (9-15 credits of which are included in the prescribed courses, the other 9-15 must be chosen from the option tracks below). A minimum of 3 credits of study abroad (meeting any requirement) and 3 credits of INTST 495 are required for the completion of this degree. Courses meeting major requirements may be taken abroad; however, typically courses taken abroad will qualify to meet a student's optino, internship, and/or language requirements.

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 18-24 credits

PRESCRIBED COURSES (18-24 credits)

PLSC 14 GS;IL(3) (Sem: 1-4)

HIST 320W(3) (Sem: 1-6)

CAS 271 US;IL(3) (Sem:3-4)

ENGL 403(3) (Sem: 3-6)

INTST 495 (3-9), PLSC 440(3) (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 15-21 credits

LATIN AMERICAN CULTURE OPTION: (15-21 credits)

ADDITIONAL COURSES (15-21 credits)

Select 15-21 credits from the following list of courses:

CAS 471 US;IL(3), CEDEV 430(3), CMLIT 153 GH;IL(3), ECON 333 GS(3), HIST 179 GH;IL(3), HIST 432 IL(3), HIST 467 US;IL(3), HIST 468 IL(3), IB 303(3), INTAG 100 GS;IL(3), SPAN 100(3) [\[83\]](#), SPAN 131 GH;IL(3) or SPAN 131Y GH;US;IL(3), SPAN 200(3) [\[83\]](#), SPAN 220(3) [\[83\]](#), SPAN 253W(3) [\[83\]](#), SPAN 300(3) [\[83\]](#), SPAN 420(3) [\[83\]](#), SPAN 476(3) [\[83\]](#), SPAN 497(1-9) [\[83\]](#) (Sem: 1-8)

CONTEMPORARY HISTORY AND POLITICS OPTION: (15-21 credits)

ADDITIONAL COURSES (15-21 credits)

Select 15-21 credits from the following list of courses:

CAS 471 US;IL(3), CEDEV 430(3), CMLIT 153 GH;IL(3), ECON 333 GS(3), ENGL 182A GH;US;IL(3), FR 139 GH;IL(3), GER 100 GH;IL(3), HIST 120 GS;IL(3), HIST 175 GH;IL(3), HIST 179 GH;IL(3), HIST 181 GH;IL(3), HIST 192 GH;IL(3), HIST 435(3), HIST 467 US;IL(3), HIST 468 IL(3), HIST 488(3), IB 303(3), INTAG 100 GS;IL(3), PLSC 412(3), PLSC 413(3), PLSC 424(3), PLSC 443(3), PLSC 454 IL(3), PLSC 487(3), RUS 100 GH;IL(3), SPAN 131 GH;IL(3), UKR 100 GH;IL(3) (Sem: 1-8)

[1] A student enrolled in this major must maintain a grade-point average of C or better, as specified in Senate Policy 82-44.

[83] These courses also constitute the projected Spanish minor.

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-04-020

Review Date: 01/10/2012

UCA Revision #2: 7/27/07

BK

**PROGRAM CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS
Begin Date of Enrollment Hold: Fall Semester 2015**

Global and International Studies

University Park, College of the Liberal Arts (GLOBE)

PROFESSOR CAROLINE ECKHARDT, *in charge*

The interdisciplinary major in Global and International Studies is intended to prepare students for lives and careers in a world that is increasingly interdependent. It reflects a "One World" concept that emphasizes the importance of global perspectives, foreign language study, and education or working experience abroad. The structure of the major also recognizes the fact that the majority of the world's people live in regions other than the European and North American sphere, and that a knowledge of non-Anglophone cultures is an important form of preparation for global citizenship. Because students need specific fields of knowledge as well as a global framework, this major is available only as a concurrent or sequential major, and students must first have a primary major. Some components of the Global and International Studies requirements may overlap with those of the primary major; for details, consult the adviser for the Global and International Studies major.

The degree (e.g., B.A., B.S., B.F.A., etc.) will normally match that of the student's first major.

Students in baccalaureate degree programs other than those leading to the B.A. who desire a B.A. degree in International Studies will receive concurrent degrees and have to fulfill all requirements for concurrent degrees and for the B.A. degree as indicated under "Concurrent Majors and Sequential Majors" in the GENERAL INFORMATION section of this bulletin and under "Baccalaureate Degree Requirements" at the beginning of this college section.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MAJOR: 30 credits

This major also requires significant experience abroad, of at least 8 weeks in length. The requirement for experience abroad can be fulfilled by formal study abroad, and/or approved internship or employment or comparable experience (such as Peace Corps service).

PRESCRIBED COURSES (3 credits)

CMLIT 010 GH;IL(3) (Sem: 1-6)

ADDITIONAL COURSES (3 credits)

Select 3 credits in Global Approaches from the following: A&A 100 GA;IL(3), ANTH 045 GS;US;IL(3), CMLIT 013 GH;IL(3), CMLIT 143 GH;US;IL(3), ECON 104 GS(3), FR 139 GH;IL(3), GEOG 040 GS;IL(3), HIST 010 GH;IL(3), HIST 011 GH;IL(3), MUSIC 009 GA;IL(3), PL SC 003 GS;IL(3), PL SC 014 GS;IL(3), RL ST 001 GH;US;IL(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

(Must include at least 12 credits at the 400 level)

A. Foreign Language

Select 12 credits EITHER in a language beyond the 12th -credit-level proficiency OR in a second foreign language, or equivalent proficiencies.[Note; For foreign language majors, study must be in a foreign language other than primary major.] (Sem: 1-5)

B. Global Perspectives (6 credits)

Select from departmental list. One course in this area or in Area C must be a 400-level course in CMLIT.

C. World Regions (6 credits)

Select from departmental list. 6 credits in courses focused on one of the following world regions: Africa, Asia and the Pacific, Eastern European and Slavic Cultures, Latin America and the Caribbean, or the Middle East. Language courses beyond the sixth semester are eligible if they focus on significant content beyond language skills. One course in this area or in Area B must be a 400-level course in CMLIT.

Last Revised by the Department: Fall Semester 2009

Blue Sheet Item #: 38-05-100

Review Date: 02/23/2010

UCA Revision #2: 7/27/07

LA

Global and International Studies

University Park, College of the Liberal Arts (GSBA)

PROFESSOR Joseph G. Wright, in charge
PROFESSOR Jonathan Abel, in charge

The interdisciplinary B.A. degree in Global and International Studies is intended to prepare students for lives and careers in a world that is increasingly interdependent. It reflects a "One World" concept that emphasizes the importance of global perspectives, international communication, and study or working experience abroad. The major combines the expertise of multiple disciplines, including the Social Sciences and the Humanities, to suggest a variety of methods for understanding the dynamic issues facing human beings across the globe. The structure of the major also recognizes the fact that the vast majority of the world's people live in regions other than the European and North American spheres, and that a knowledge of non-Anglophone cultures is an important form of preparation for global citizenship.

The major develops transnational and trans-regional literacy, drawing on coursework both in the Humanities and the Social Sciences to focus on questions of globalization, ethical imagination, and ways to engage peoples and cultures in local terms. Students learn to situate global trends, both macro and micro in nature, in relation to other historical processes. Most courses for the GLIS major will demonstrate a global or regional (rather than national) perspective and address a central topic in one of five designated Pathways.

Human Rights

This Pathway examines the history, development, enforcement, and violations of concepts of the basic rights of mankind. Whether through questions of torture, freedom of conscience, trafficking of women and children, agreements about prisoners of war, human rights constantly need redefining and rethinking if they are to be broad enough to cover everyone on our planet and specific enough to have a real effect on human behavior.

Culture and Identity

Global economic, political, and cultural processes are bound up with complex questions of culture and identity at the individual, familial, and community levels. Examining how differences in language, ideology, religion, race, gender, ethnicity, and sexual orientation among others impact our sense of self and other, this Pathway considers: foundational expressions of social and cultural values; the formation and contestation of identity over time; the impacts of modernization on individual, family, and community identity; genetic manipulation and modification; and questions of colonization and colonialism on political and cultural structures.

Global Conflict

This Pathway examines war, peace, and security on a global and historical scale to reveal the contingent decisions, random accidents, and devious schemes which continue to be at the root of violence around the world. This Pathway studies conflicts great and small, from tribal warfare to national and international wars, revolutions, acts of terrorism, and so on. It also considers successful and unsuccessful efforts to halt conflict, and how and why approaches to and experiences with peace can affect conflict situations.

Wealth and Inequality

This Pathway considers global distribution of people, goods, and money, both in the contemporary world and in deep historical time, examining feudalism, trade, imperialism, nationalism, and the socioeconomic impacts of globalization. Some of the themes on which it focuses include: motivations for and experiences of such human movement as migration, exploration, travel, slavery, diaspora, asylum, and exile; demographic change; poverty, wealth, and economic inequality; and political, social, and cultural incentives for and restrictions on circulation (censorship, translation, free trade, prize culture, protectionism, access, privilege, bias).

Health and Environment

This Pathway considers the direct impact of global issues on the life on our planet. As intercontinental travel makes nearly every epidemic already global today, the more and more the health of individuals is directly connected to the health of the globe. Growing populations, aging demographics, increasing pollution, and decreasing food resources present new challenges for global human health. Similarly the global cycles of climate change and crisis force us to reconsider both natural processes and anthropogenic influences, examining the philosophy and history of human's place in nature. Some of the themes on which this Pathway focuses include: the relationship between local resources and global geopolitics; cultural, economic, and social effects of global climate change; pollution and conservation; environmental movements; and evolution and extinction.

Alternatively, students with a GPA above 3.5 may work with advisors and faculty to create a personalized Pathway that reflects their interests.

The B.A. degree requires six credits of foreign-language study beyond the 12-credit proficiency level, or in a second foreign language. The B.A. degree may include a significant engaged scholarship experience (such as undertaking an internship, job, volunteer position, or period of study) located either abroad or in a majority non-English-speaking part of the United States.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

For the B.A. degree in Global and International Studies, a minimum of 120 credits is required

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits

PRESCRIBED COURSES (9 credits)

GLIS 101 GS; IL(3), GLIS 102 GH;IL(3) (Sem: 1-4)

GLIS 400 IL;WAC(3) (Sem: 6-8)

ADDITIONAL COURSES (6 credits)

Select EITHER 6 cr. in a language **beyond** 12th-credit level proficiency, OR 6 cr. in a second foreign language, or equivalent proficiencies. Courses must be taught in the language, i.e., not in English (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 21 credits in the Pathway courses. Lists of the Pathway courses are kept by departmental advisors, and appear online on the program's website, glis.la.psu.edu

-15 credits of these 21 will be in a single Pathway concentration (no more than 6 credits towards the Pathway completion are to be from courses in a single department).

-6 credits of these 21 are from other Pathway concentrations.

- At least 12 credits must be taken at the 400 level or higher.

With approval of the academic advisor and/or the directors of undergraduate studies for the GLIS major, students are encouraged to substitute up to 15 credits of their Pathway work with equivalent coursework in significant engaged scholarship experience (such as undertaking an internship, job, volunteer position, or period of study) located either abroad or in a majority non-English-speaking part of the United States.

Blue Sheet Item #: 46-03-043

Review Date: 11/14/2017

Global and International Studies

University Park, College of the Liberal Arts (GSBS)

PROFESSOR Joseph G. Wright, in charge
PROFESSOR Jonathan Abel, in charge

The interdisciplinary B.S. degree in Global and International Studies is intended to prepare students for lives and careers in a world that is increasingly interdependent. It reflects a "One World" concept that emphasizes the importance of global perspectives, international communication, and study or working experience abroad. The major combines the expertise of multiple disciplines, including the Social Sciences and the Humanities, to suggest a variety of methods for understanding the dynamic issues facing human beings across the globe. The structure of the major also recognizes the fact that the vast majority of the world's people live in regions other than the European and North American spheres, and that a knowledge of non-Anglophone cultures is an important form of preparation for global citizenship.

The major develops transnational and trans-regional literacy, drawing on coursework both in the Humanities and the Social Sciences to focus on questions of globalization, ethical imagination, and ways to engage peoples and cultures in local terms. Students learn to situate global trends, both macro and micro in nature, in relation to other historical processes. Most courses for the GLIS major will demonstrate a global or regional (rather than national) perspective and address a central topic in one of five designated Pathways.

Human Rights

This Pathway examines the history, development, enforcement, and violations of concepts of the basic rights of mankind. Whether through questions of torture, freedom of conscience, trafficking of women and children, agreements about prisoners of war, human rights constantly need redefining and rethinking if they are to be broad enough to cover everyone on our planet and specific enough to have a real effect on human behavior.

Culture and Identity

Global economic, political, and cultural processes are bound up with complex questions of culture and identity at the individual, familial, and community levels. Examining how differences in language, ideology, religion, race, gender, ethnicity, and sexual orientation among others impact our sense of self and other, this Pathway considers: foundational expressions of social and cultural values; the formation and contestation of identity over time; the impacts of modernization on individual, family, and community identity; genetic manipulation and modification; and questions of colonization and colonialism on political and cultural structures.

Global Conflict

This Pathway examines war, peace, and security on a global and historical scale to reveal the contingent decisions, random accidents, and devious schemes which continue to be at the root of violence around the world. This Pathway studies conflicts great and small, from tribal warfare to national and international wars, revolutions, acts of terrorism, and so on. It also considers successful and unsuccessful efforts to halt conflict, and how and why approaches to and experiences with peace can affect conflict situations.

Wealth and Inequality

This Pathway considers global distribution of people, goods, and money, both in the contemporary world and in deep historical time, examining feudalism, trade, imperialism, nationalism, and the socioeconomic impacts of globalization. Some of the themes on which it focuses include: motivations for and experiences of such human movement as migration, exploration, travel, slavery, diaspora, asylum, and exile; demographic change; poverty, wealth, and economic inequality; and political, social, and cultural incentives for and restrictions on circulation (censorship, translation, free trade, prize culture, protectionism, access, privilege, bias).

Health and Environment

This Pathway considers the direct impact of global issues on the life on our planet. As intercontinental travel makes nearly every epidemic already global today, the more and more the health of individuals is directly connected to the health of the globe. Growing populations, aging demographics, increasing pollution, and decreasing food resources present new challenges for global human health. Similarly the global cycles of climate change and crisis force us to reconsider both natural processes and anthropogenic influences, examining the philosophy and history of human's place in nature. Some of the themes on which this Pathway focuses include: the relationship between local resources and global geopolitics; cultural, economic, and social effects of global climate change; pollution and conservation; environmental movements; and evolution and extinction.

Alternatively, students with a GPA above 3.5 may work with advisors and faculty to create a personalized Pathway that reflects their interests.

The B.S. degree requires six credits in quantitative competencies appropriate to the social sciences. The B.S. degree may include a significant engaged scholarship experience (such as undertaking an internship, job, volunteer position, or period of study) located either abroad or in a majority non-English-speaking part of the United States.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

For the B.S. degree in Global and International Studies, a minimum of 120 credits is required.

GENERAL EDUCATION: 45 credits

(3-6 GQ credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 21-24 credits

REQUIREMENTS FOR THE MAJOR: 57-58 credits

PRESCRIBED COURSES (12 credits)

GLIS 101 GS;IL(3), GLIS 102 GH;IL(3) (Sem: 1-4)
MATH 21 GQ(3) (Sem: 1-8)
GLIS 400 IL(3) (Sem: 6-8)

ADDITIONAL COURSES (3-4 credits)

Choose 3-4 credits from one of the following: STAT 100 GQ(3), STAT 200 GQ(4), SOC 207(3), or PSYCH 200 GQ(4) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (42 credits)

Select 21 credits in the Pathway courses. Lists of the Pathway courses are kept by departmental advisors, and appear online on the program's website, glis.la.psu.edu.

-15 credits of these 21 will be in a single Pathway concentration (no more than 6 credits towards the Pathway completion are to be from courses in a single department).

-6 credits of these 21 are from other Pathway concentrations.

- At least 12 credits must be taken at the 400 level or higher. These credits do not have to be within a single Pathway.

Select 21 credits in related areas such as engineering, business, science, the humanities, or the social sciences, or in another area where competency in Global and International Studies is desirable. The courses are to be selected in consultation with an advisor. At least six credits of such courses must be at

the 400-level.

With approval of the academic advisor and/or the directors of undergraduate studies for the GLIS major, students with equivalent coursework in significant engaged scholarship experience (such as undertaking an internship, job, volunteer position, or period of study) located either abroad or in a majority non-English-speaking part of the United States, may use up to 15 of those credits to substitute for credits in the Pathways.

Blue Sheet Item #: 46-03-044

Review Date: 11/14/2017

Geosciences

University Park, College of Earth and Mineral Sciences (GSCBA)

PROFESSOR PETER J. HEANEY, Associate Head for Undergraduate Programs

The geosciences are concerned with understanding earth processes and the evolutionary history of the Earth. Geoscientists work to discover and develop natural resources such as groundwater, metals, and energy sources; to solve technology-generated environmental problems such as acid mine drainage and waste disposal; to predict geological events, such as the occurrence of earthquakes and volcanism; and to solve fundamental questions concerning the origin and evolution of Earth and life. The Bachelor of Arts degree program stresses data collection; investigation, analysis and synthesis of information related to complex natural problems; rigor of thought and clarity of oral and written expression. The B.A. provides a basic education in geosciences, and is designed for students who wish to prepare themselves for careers that interface among science, social science, and business. Examples of these careers include environmental law, national and international planning or resource management, and K-12 teaching.

For the B.A. degree in Geosciences, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 72 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GWS courses.)

PRESCRIBED COURSES (10 credits)

EMSC 100S GWS(3) [\[71\]](#) (Sem: 1-2)

GEO SC 1(3) [\[11\]](#) [if GEO SC 1 is not available, GEO SC 20 GN(3) may be substituted] (Sem: 1-6)

GEO SC 201(4) [\[11\]](#) (Sem: 3-6)

ADDITIONAL COURSES (48-51 credits)

ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

MATH 140 GQ(4) or MATH 110 GQ(4) (Sem: 1-2)

GEO SC 310(4) [\[11\]](#) or GEO SC 320(3) [\[11\]](#) (Sem: 3-6)

GEO SC 202(4), GEO SC 203(4), or GEO SC 204(4) (Sem: 5-8)

Select 20 credits--two of the following sequences for 8 credits each and the third sequence for 4 credits:

-BIOL 110 GN(4), BIOL 220W GN(4) (Sem: 1-4)

-CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-4)

-PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 1-4)

Note: PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2) may substitute for up to 8 credits in Physics for students with MATH 140 GQ(4), MATH 141 GQ(4).

Select 2-4 credits of advanced mathematics in consultation with an adviser; list includes MATH 111 GQ(2), MATH 141 GQ(4), STAT 200 GQ(4), STAT 250 GQ(3) (Sem: 2-6)

Select 6 credits from 300- and 400-level GEO SC courses (Sem: 5-8)

Select 3 credits of appropriate field/laboratory experience in consultation with adviser (Sem: 6-8)

Select 3 credits of writing-intensive courses from within Earth and Mineral Sciences to include, but not limited to: GEOG 412(3), GEOG 310(3), GEO SC 402(3), GEO SC 470(1-6), METEO 471(3) (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS (11-14 credits)

Select 11-14 credits in consultation with adviser.

(Students may apply 6 credits of ROTC) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[71] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EMSC 100S GWS.

Last Revised by the Department: Summer Session 2000

Blue Sheet Item #: 28-05-014

Review Date: 10/8/02

UCA Revision #1: 8/8/06

EM

Geosciences

University Park, College of Earth and Mineral Sciences (GSCBS)

PROFESSOR PETER J. HEANEY, Associate Head for Undergraduate Programs

The geosciences are concerned with understanding earth processes and the evolutionary history of the Earth. Geoscientists work to discover and develop natural resources such as groundwater, metals, and energy sources; to solve technology-generated environmental problems such as acid mine drainage and waste disposal; to predict geological events, such as the occurrence of earthquakes and volcanism; and to solve fundamental questions concerning the origin and evolution of Earth and life. Our degree programs stress data collection; investigation, analysis and synthesis of information related to complex natural problems; and rigor of thought and clarity of oral and written expression. The B.S. provides a broad foundation in the physical and natural sciences for students who seek immediate employment or post-graduate education in several areas of the geosciences. Examples of careers include the petroleum and mining industries; local or federal resource management; water resources, treatment and management; energy and environmental industries; and academia. A senior thesis involving independent research is required of all students.

Entry to Major Requirements:

In addition to the minimum grade point average (GPA) requirements described in the University Policies, the Geosciences entrance-to-major requirement must also be completed with a minimum grade of C: MATH 140 GQ(4).

GENERAL OPTION: This option is designed to provide sufficient flexibility so that the student has the opportunity to prepare for graduate school by focusing on specialized areas in the geosciences. The option's flexibility also permits students to develop a broad background in the geosciences in preparation for post-graduate majors that require breadth, such as environmental law.

HYDROGEOLOGY OPTION: This option helps prepare the student for entry-level positions in environmental agencies and firms where a specialized knowledge of groundwater and related areas is required. The option is also appropriate for students wishing to pursue an advanced degree in the area of hydrogeology.

For the B.S. degree in Geosciences, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits
(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 97 credits
(This includes 21 credits of General Education courses: 9 credits of GN courses, 6 credits of GQ courses, 6 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 69 credits

PRESCRIBED COURSES (66 credits)
BIOL 110 GN(4), EMSC 100S GWS(3) [71], MATH 140 GQ(4) [11], MATH 141 GQ(4) (Sem: 1-2)
CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), PHYS 211 GN(4), PHYS 213 GN(2) (Sem: 1-4)
GEOSC 1(3) [if GEOSC 1 is not available, GEOSC 20 GN(3) may be substituted] (Sem: 1-6)
GEOSC 201(4) [11], GEOSC 202(4) [11], GEOSC 204(4) (Sem: 3-6)
GEOSC 203(4) [11], GEOSC 310(4) [11], GEOSC 465(4) [11], GEOSC 472A(3), GEOSC 472B(3) (Sem: 5-6)
GEOSC 494W(3), GEOSC 496(1) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)
ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

REQUIREMENTS FOR THE OPTION: 28 credits

GENERAL OPTION: (28 credits)

ADDITIONAL COURSES (14 credits)
Select 14 credits from 300- and 400-level GEOSC courses: GEOSC 303(3), GEOSC 340(3), GEOSC 402(3), GEOSC 416(3), GEOSC 422(3), GEOSC 424(3), GEOSC 434(3), GEOSC 439(3), GEOSC 440(3), GEOSC 451(3), GEOSC 452(3), GEOSC 454(3), GEOSC 470(3), GEOSC 489(4) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (14 credits)
Select at least 2 credits in physics from approved departmental list (Sem: 1-4)
Select 3 credits of computer science, mathematics [above the level of MATH 141 GQ(4)], or statistics (Sem: 3-6)
Select 9 credits, in consultation with adviser, supportive of the student's interest (Students may apply 6 credits of ROTC.) (Sem: 3-8)

HYDROGEOLOGY OPTION: (28 credits)

PRESCRIBED COURSE (3 credits)
GEOSC 452(3) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)
Select 3 credits from CMPSC 201 GQ(3), CMPSC 202 GQ(3), CMPSC 203 GQ(4), STAT 250 GQ(3) [if STAT 250 is not available, STAT 200 GQ(4) may be substituted] (Sem: 3-8)

Select 3 credits from ASM 327(3), ERM 450(3), SOILS 101 GN(3) (Sem: 5-8)
Select 9 credits from A and B. Students must select at least 3 credits from A and 3 credits from B.
A. CHEM 202(3), CHEM 450(3), ERM 433(3), GEOSC 413(3), GEOSC 419(3) (Sem: 3-8)
B. ENVSE 408(3), GEOG 362(3), GEOSC 340(3), GEOSC 439(3), GEOSC 454(3), GEOSC 483(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (10 credits)
Select at least 2 credits in Physics from approved departmental list (Sem: 1-4)
Select 8 credits, in consultation with advisor, supportive of the student's interest. (Students may apply 6 credits of ROTC) (Sem: 3-8)

Integrated B.S./M.S. Program in Geosciences

The Department of Geosciences offers an integrated B.S./MS. Program that is designed to allow academically superior students to obtain both the B.S. and the M.S. degree in Geosciences within 5 years of study. Students who wish to complete the Integrated B.S./M.S. Program in Geosciences must apply for admission to the Graduate School and the Integrated B.S./M.S. program by the end of their junior year.

During the first three years, the student follows the course scheduling of one of the options in Geosciences; however, if a student intends to enter the Integrated B.S./M.S. program, he/she would be encouraged to take, wherever appropriate, upper level classes. By the end of the junior year, the student normally would apply for admission to the program. A decision of acceptance would be made prior to the beginning of the senior year and a M.S. Advising Committee appointed. During the senior year, the student would follow the scheduling of the B.S. Geosciences option he/she has selected, with an emphasis

on completing 500-level coursework wherever appropriate. In place of the Senior Thesis, the student will complete a M.S. Thesis

During the fifth year the student will take courses fulfilling the departmental M.S. degree requirements and complete the M.S. Thesis.

Admissions Requirements

Students who wish to complete the Integrated B.S./M.S. Program in Geosciences must apply for admission to the Graduate School and the Integrated B.S./M.S. program by the end of their junior year. Typical tests scores of students admitted to the Geosciences Graduate Program are: GPA 3.5, and GRE's Verbal 570 and Quantitative 700. Three letters of recommendation by faculty members for admission to graduate studies are required. The applications are reviewed by the Admissions Committee of the Geosciences Graduate Program and acted upon by the Associate Head for Graduate Programs.

The details of the program requirements can be found in the *Graduate Degree Programs Bulletin*.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[71] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EM SC 100S GWS.

Last Revised by the Department: Fall Semester 2013 (GSCBS); Summer Session 2005 (Integrated B.S./M.S.)

Blue Sheet Item #: 42-04-019 (GSCBS); 33-04-165 (Integrated B.S./M.S.)

Review Date: 01/14/2014

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

EM

Health Policy and Administration

Capital College (HPACA)

University Park, College of Health and Human Development (H P A)

University College: Penn State Lehigh Valley, Penn State Mont Alto (HPACC)

Penn State World Campus

PROFESSOR MARIANNE HILLEMIEER, *Head of the Department*

This major helps prepare students for management and policy positions or graduate study in the field of health care. Students in the major develop the skills and knowledge needed to understand the complex societal problem of providing access to quality health care at reasonable cost. All Health Policy and Administration students complete an internship in a health-care-related setting, giving them valuable experience and contacts in the industry. HPA students study a multidisciplinary curriculum that prepares them to work as health services managers or health analysts. Health services managers, also called health care executives or health care administrators, plan, direct, and coordinate medical, health, and/or long-term care services. They might manage an entire facility or specialize in managing a specific clinical area or department, administrate a program or manage a practice for a group of providers. Health analysts are employed throughout the health care industry gathering, compiling, modeling, validating, and analyzing data needed by different organizations of providers, payers, and policy makers. Analysts help these organizations understand the current trends in the health care system and to make well-informed decisions. Both health services managers and analysts must be able to adapt to changes in health care laws, regulations, and technology. HPA students have also used the degree to prepare for graduate study in business, law, medicine or allied health fields, health administration, health services research or policy, and public health.

The requirements for the major are outlined below. Students may select courses in the Supporting Courses and Related Areas category to fulfill requirements for a minor, to develop a specialization, or to complete courses required for admission to medical, dental, law, or other graduate schools.

For the B.S. degree in Health Policy and Administration, a minimum of 120 credits is required.

The integrated B.S. in Health Policy and Administration/Master of Health Administration (MHA) program allows qualified undergraduate students to earn both degrees in five calendar years of full time academic study.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. H P A requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 4-6 credits

REQUIREMENTS FOR THE MAJOR: (81-83 credits)

(This includes 12 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (36 credits) [\[1\]](#)

ECON 102 GS(3), PLSC 1 GS(3), (Sem: 1-4)

HPA 101(3), HPA 210(3), HPA 211(3), HPA 301(3), HPA 310(3), HPA 311(3), HPA 332(3), HPA 390(3), HPA 395(3), HPA 455(3) (Sem: 1-8)

ADDITIONAL COURSES (15-17 credits) [\[1\]](#)

STAT 200 GQ(4) or STAT 250 GQ(3) (Sem: 1-4)

CMPSC 101 GQ(3) or CMPSC 203 GQ(4) (Sem: 3-4)

Select 9 credits from HPA 401 IL(3), HPA 410(3), HPA 420(3), HPA 430(3), HPA 433(3), HPA 440 US;IL(3), HPA 442(3), HPA 445(3), HPA 447(3), HPA 450(3), HPA 460(3), HPA 470(3), HPA 490(3) or HPA 497 (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (30 credits)

(Must include at least 9 credits at the 400 level)

Select 30 credits from University-wide offerings on department list in consultation with adviser (Sem: 5-8)

Integrated B.S. in Health Policy and Administration/Master of Health Administration (M.H.A.) Admission and Degree Requirements

The following credentials will be considered for admission:

- A demonstrated ability to communicate effectively, an advanced level of maturity, and high motivation to pursue a career in the health care field
- Academic references
- Successful completion of 60 credits having maintained a cumulative GPA of 3.4 or better

Students admitted to the B.S. in Health Policy and Administration/MHA integrated program are able to earn both the B.S. and MHA in five calendar years of full time academic study.

A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2015 (H P A); Summer Session 2005 (Integrated B.S./H P A-M.H.A.)

Blue Sheet Item #: 44-02-032 (H P A); 38-06-114A (Integrated B.S./H P A-M.H.A.)

Review Date: 10/13/2015

HH

Human Development and Family Studies

Penn State Altoona (HFSAL)

Penn State Harrisburg (HFSHA)

University College (HFSU): Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Mont Alto, Penn State Shenango, Penn State Worthington-Scranton, Penn State York

College of Health and Human Development (HD FS)

World Campus

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR DOUGLAS M. TETI, *Head of the Department*

This major is a multidisciplinary program that examines the development of individuals and families across the life span. It enables students to prepare for professional, managerial, or scientific roles in health and human services professions, in public and nonprofit agencies, and in business and industry, as well as for advanced professional or graduate study. Students obtain a broad background in individual and family development across the life span. Courses emphasize biological, psychological, social/cultural, and economic aspects of development. Through course work and undergraduate internships or research projects, students develop skills relevant to career objectives, such as counseling, human assessment, program planning and evaluation, and research.

Two options are available within the major: (1) Life Span Human Services option and (2) Life Span Developmental Science option. The introductory paragraph to each of the options includes a brief list of career opportunities. More extensive descriptions of career opportunities in both public and private sectors are available for the program.

LIFE SPAN HUMAN SERVICES OPTION: This option focuses on the acquisition and application of scientific knowledge about development and family functioning across the life span for the purposes of enhancing personal and family development. Courses emphasize: (1) understanding the biological, psychological, and social development across the life span, and the structuring and functioning of families; (2) understanding basic theoretical and methodological issues; and (3) the development of applied skills in intervention and evaluation, prevention, and in the formulation of social policy. An approved field experience in a setting that serves children, youth, adults, or the aged is required for this option. Typical employment settings include preschools, daycare centers, hospital programs for children, youth, and families, institutional and community mental health programs for individuals and families, programs for abused or neglected children and adolescents, women's resource centers, human resources programs, employee assistance programs, nursing homes, area agencies on aging and other community settings for older adults, and public welfare and family service agencies. Typical postgraduate pursuits of students completing this option include graduate study in human development, family studies, psychology, or sociology, or advanced professional training in psychology, law, behavioral health, counseling or social work.

LIFE SPAN DEVELOPMENTAL SCIENCE OPTION: This option focuses on the understanding of contemporary methodological approaches to the acquisition of scientific knowledge about individual development over the life span and about family development. This option provides preparation for advanced training in careers in developmental or family research, teaching at a college or university, or for professional careers that require graduate training. Courses within this option emphasize a thorough understanding of the theory and methods of developmental and family theory and research. An approved, multi-semester research practicum is an integral component of this option. Typical postgraduate pursuits of students completing this option include graduate study in human development, family studies, psychology, or sociology, or advanced professional training in psychology, law, behavioral health, social work, or in other programs related to services for individuals and families.

For the B.S. degree in Human Development and Family Studies, a minimum of 120 credits is required.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. HD FS requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(3-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selections, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 3-5 credits

REQUIREMENTS FOR THE MAJOR: 73-76 credits

(This includes 3-4 credits of General Education GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 30-31 credits

PRESCRIBED COURSES (18 credits)[\[11\]](#)

HDFS 129 GS(3), HDFS 301(3), HDFS 311(3), HDFS 312(3), HDFS 315 US(3)[\[93\]](#), HDFS 418(3) (Sem: 3-6)

ADDITIONAL COURSES (12-13 credits)[\[11\]](#)

Select 6 credits from HDFS 229 GS(3), HDFS 239 GS(3), HDFS 249 GS(3) (Sem: 1-4)

STAT 200 GQ(4) or EDPSY 101 GQ(3) (Sem: 1-4)

Select 3 credits of United States Cultures (US)[\[92\]](#) (Sem: 4-8)

REQUIREMENTS FOR THE OPTION: 43-45 credits

LIFE SPAN HUMAN SERVICES OPTION: (43-45 credits)

PRESCRIBED COURSES (9 credits)[\[11\]](#)

HDFS 411(3), HDFS 414(3), HDFS 455(3) (Sem: 5-8)

ADDITIONAL COURSES (22-24 credits)[\[11\]](#)

Select 3 credits from HDFS 428(3), HDFS 429(3), HDFS 433(3) or HDFS 445(3) (Sem: 5-8)

Select 6 credits from 300- or 400-level HDFS courses (Sem: 5-8)

Select 13-15 credits from (a) or (b)

(a) Approved field practice in a human service setting: HDFS 490(2), HDFS 495A(9), HDFS 495B(3) (Sem: 5-8)

(b) Approved group project or field practice in human service setting: HDFS 401(3), HDFS 402(4), HDFS 495C(6-8) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits (minimum of 6 credits at the 400 level) in consultation with adviser from University-wide offerings that develop competency in the option (a grade of C or better is required in any HDFS course taken to satisfy this requirement) (Sem: 5-8)

LIFE SPAN DEVELOPMENTAL SCIENCE OPTION: 45 credits

PRESCRIBED COURSES (6 credits)[\[11\]](#)

HDFS 494(6) or HDFS 494H(6) (Sem: 5-8)

ADDITIONAL COURSES (21 credits) [\[1\]](#)

Select 6 credits from HDFS 428(3), HDFS 429(3), HDFS 433(3), HDFS 445(3) (Sem: 5-8)
Select 15 credits (minimum of 9 credits at the 400-level) from HDFS courses (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 18 credits (minimum of 9 credits at the 400 level) in consultation with adviser from University-wide offerings that develop competency in option (a grade of C or better is required in any HD FS course taken to satisfy this requirement) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[92] This course is in addition to the 6 credits of United States Cultures and International Cultures.

[93] This course fulfills the University's United States Cultures requirement.

Last Revised by the Department: Summer Session 2006

Blue Sheet Item #: 34-02-111

Review Date: 10/11/05

HH

History

Altoona College (HISAL)

This major provides a broad introduction to the history of the great civilizations of the world and specific areas of historical inquiry. Centered in one of the basic, traditional disciplines, the History major offers invaluable preparation for students interested in a career in government, international relations, law, or librarianship, as well as essential training for those interested in a professional career as an academic or public historian, archivist, or secondary school teacher. Along with the perspective on the present that a study of the past engenders, the program develops skills in research, analysis, and synthesis that have proved useful in commerce and industry. The History major combines easily with minors or even multiple majors, providing flexibility in one's career choice.

For a B.A. degree in History, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 37 credits [\[1\]](#)

PRESCRIBED COURSES (3 credits)

HIST 302(3) (Sem: 5-6)

ADDITIONAL COURSES (16 credits)

Select 12 credits in two of the three focus areas: HIST 1 GH;IL(3) and HIST 2 GH;IL(3); HIST 10 GH;IL(3) and HIST 11 GH;IL(3); HIST 20 GH;US(3) and HIST 21GH(3) (Sem: 1-8)
HIST 494(4) or HIST 495(4) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

At least 8 credits must be at the 400-level

Select 12 credits in history (Sem: 1-8)

Select 6 credits in non-Western history (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2005

Blue Sheet Item #: 33-01-010

Review Date: 2/26/07

AL

History

Abington College (HSTAB)
University Park, College of the Liberal Arts (HIST)

PROFESSOR MICHAEL KULIKOWSKI, Head

This major provides a broad introduction to the history of the great civilizations of the world and specific areas of historical inquiry. Centered in one of the basic, traditional disciplines, the History major offers invaluable preparation for students interested in a career in government, international relations, law, or librarianship, as well as essential training for those interested in a professional career as an academic or public historian, archivist, or secondary school teacher. Along with the perspective on the present that a study of the past engenders, the program develops skills in research, analysis, and synthesis that have proved useful in commerce and industry. The History major permits easy combination with minors, area studies, or even a concurrent major, providing flexibility in one's career choice.

For the B.A. degree in History, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits^[1]

PRESCRIBED COURSES (3 credits)
HIST 302(3) (Sem: 5-6)

ADDITIONAL COURSES (6 credits)
Choose one sequence from the following three:
HIST 1 GH;IL(3), HIST 2 GH;IL(3) (Sem: 1-4)
HIST 10 GH;IL(3), HIST 11 GH;IL(3) (Sem: 1-4)
HIST 20 GH;US(3), HIST 21 GH;US(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (27 credits)
Select 12 credits, in consultation with an advisor, at the 100-200-level, one course from **each** of the following field categories: Europe, United States, Global, Pre-Modern* (Sem: 1-4)
Select 3 credits at the 100-400-level (Sem: 1-8)
Select 12 credits at the 400-level, at least one course which must be in Global History (Sem: 5-8)

* Courses that appear in two History categories (such as HIST 174) cannot be double-counted to be applied to two field categories. However, the student may choose to which category to apply the course.

Integrated B.A./M.A. Program in History

The Department of History offers an integrated B.A./M.A. program that is designed to allow academically superior baccalaureate students to obtain both the B.A. and the M.A. degrees in History within five years of study. The first two years of undergraduate coursework include the University General Education and Liberal Arts requirements in addition to introductory coursework in the major. In the third year, students are expected to take upper-level courses and the department's undergraduate capstone seminar. By the fourth year students should have selected the primary fields of study and be enrolled exclusively in 400 and graduate-level courses in those areas. The fifth and final year of the program typically consists purely of graduate seminars. The program culminates with an M.A. oral defense of seminar papers that best represents their interests and work written in two of the graduate seminars.

By encouraging greater depth and focus by the beginning of the third undergraduate year, this program will help the student more clearly define his/her area of interest among the four main primary areas of focus in the department's graduate program. As a result, long-range academic planning for exceptional students pursuing doctoral degrees after leaving Penn State, or other professional goals, will be greatly enhanced. With the IUG they would be highly qualified to enter directly into careers in secondary education, and other government positions that require graduate degrees. Students who have completed this program but wish to continue on to a Ph.D. will be more competitive in applying for admission to Ph.D. programs in History and Area Studies but also will be well placed to apply to other professional programs including library science, law, and museum studies.

Admission Requirements

The number of openings in the integrated B.A./M.A. program is limited. Admission will be selective based on specific criteria and the unqualified recommendation of faculty. Applicants to the integrated program:

1. Must be enrolled in the History B.A. program^[1].
2. Must have completed 60 credits of the undergraduate degree program (it is strongly suggested that students apply to the program prior to completing 100 credits).
3. Must be accepted without reservation into the M.A. program in History.
4. Should have a recommended overall GPA of 3.2 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
5. Must present a departmentally approved plan of study in the application process.
6. Must be recommended by the chairs of the Department's undergraduate and graduate committees.

Degree Requirements

Students must complete the requirements for a B.A. in history.

Students must complete the Master of History Requirements, which total 30 credit hours of graduate instruction, in addition to completing **123** credit hours of undergraduate instruction.

The 400-level courses, totaling 18 credit hours, can double-count towards both the B.A. and Master of History degrees.

Students must complete a minimum of 30 credit hours of graduate instruction over and above the 123 credit hours required of the B.A. degree in history. All 30 of these credit hours must be earned in 400-level, 500-level, or 600-level courses.

These 500-level courses must be grouped into two primary fields of study **with a minimum of 6 credit hours in each field.**

Student must have satisfactory academic performance to maintain enrollment in the program. A grade point average of 3.0 in the 30 credit hours of graduate instruction is required to receive the master's degree.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-070

Review Date: 04/09/2013

Department head updated by Publications: 3/23/11

Hospitality Management

University Park, College of Health and Human Development (HM)
Penn State Berks (HMBL) - Effective Fall Semester 2015

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR Donna Quadri-Felitti, *Director and Associate Professor, School of Hospitality Management*

This major helps provide preparation for management positions in hotels, restaurants, institutions, and other hospitality organizations. The program is designed to give the student a broad general education and a strong management and problem-solving orientation balanced with the requisite technical skills, all of them essential for career progression to upper-management positions in the hospitality professions. The program also helps prepare students for graduate study.

HOSPITALITY MANAGEMENT OPTION: This option helps prepare students for management positions in any segment of the hospitality industry, including hotels, restaurants, institutional or non-commercial operations, clubs, resorts, and casinos. The management focus helps provide students with the analytical, interpersonal, and organizational skills necessary to effectively function as hospitality professionals.

HOSPITALITY ENTREPRENEURSHIP OPTION: (offered only at Penn State Berks) This option helps prepare students for careers as owners or managers of small independently-owned hospitality operations or as entrepreneurs within large hospitality corporations or management companies in hospitality segments such as a restaurants, hotels, and non-commercial operations. The entrepreneurship focus helps provide students with creative problem solving, opportunity recognition, and leadership skills necessary to effectively manage small or individual unit's hospitality operations.

For the B.S. degree in Hospitality Management, a minimum of 120.5 credits is required. The B.S. degree program consists of two options: (1) Hospitality Management and Hospitality Entrepreneurship.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. SHM requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(9-10.5 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 11-12.5 credit

REQUIREMENTS FOR THE MAJOR: 86-87.5 credits^[1]
(For the HM option, this includes 10.5 credits of General Education courses: 6 credits of GQ courses; 3 credits of GS courses; 1.5 credit of GHA courses. For the Hospitality Entrepreneurship option, this includes 9 credits of General Education courses: 3 credits of GS courses and 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 65 credits

PRESCRIBED COURSES (62 credits)
ACCTG 211(4), ECON 102 GS(3), STAT 200 GQ(4) (Sem: 1-4)
HM 201(3), HM 202(1), HM 203(1), HM 228(1), HM 271(3), HM 290W(3), HM 329(3), HM 330(2), HM 335(3), HM 336(3), HM 350 GQ(3), HM 365 IL(3), HM 380(3), HM 430(3), HM 435(3), HM 442(3), HM 466 US(3), HM 490(3), HM 492(1), NUTR 119(3)(Sem: 5-8)

ADDITIONAL COURSES (3 credits)
BA 303(3) or MKTG 221(3) (Sem: 1-4)

REQUIREMENTS FOR THE OPTION: 21-22.5 credits

HOSPITALITY MANAGEMENT OPTION: (22.5 credits)

PRESCRIBED COURSES (7.5 credits)
HM 355(3), HM 480(3), NUTR 100 GHA(1.5) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS: (15 credits)
Select 15 credits of HM courses from an approved department list, up to 4 credits of any foreign language, and other courses in consultation with an advisor.

HOSPITALITY ENTREPRENEURSHIP OPTION: (21-22 credits)

PRESCRIBED COURSES (12 credits)
HM 305(3), HM 319(3), HM 484(3), MGMT 215(3) (Sem: 5-6)

ADDITIONAL COURSES (9-10 credits)
Select 9-10 credits from the following: BA 243(4), BA 250(3), ENGR 310(3), MGMT 425(3), MGMT 427(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-067

Review Date: 8/23/2016

UCA Revision #1: 8/8/06

HH

School director updated: 4/16/13

History

Penn State Erie, The Behrend College (HSTBA)

The B.A. degree program in History focuses on the study of the evolution of American and European institutions. This program enables students to pursue history in the traditional mode as a study of written records.

For the B.A. degree in History, a minimum of 124 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(3 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in the MAJOR Requirements)

ELECTIVES: 19 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 39 credits
(This includes 3 credits of General Education GWS courses.)

ADDITIONAL COURSES (30 credits)
Select 3 credits from: HIST 1 GH;IL(3) or HIST 10 GH;IL(3) (Sem: 1-2)
Select 9 credits from HIST 1 GH;IL(3), HIST 2 GH;IL(3), HIST 10 GH;IL(3), HIST 11 GH;IL(3), HIST 20 GH;US(3), HIST 21 GH;US(3) (Sem: 1-8)
Select 3 credits from: ENGL 202A GWS(3) or ENGL 202B GWS(3) (Sem: 3-6)
Select 3 credits from: HIST 301(3) or HIST 302(3) (Sem: 5-6)
Select 12 credits of HIST at the 400-level or ANTH 420(3); ANTH 492(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 3 credits in each of the area categories - United States, Europe, and World from school-approved list (Sem: 1-8)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-032

Review Date: 8/23/2016

BD

Industrial Engineering

University Park, College of Engineering (I E)

PROFESSOR JANIS TERPENNY, Head, Harold and Inge Marcus Department of Industrial and Manufacturing Engineering

The undergraduate program in industrial engineering, being the first established in the world, has a long tradition of providing a strong, technical, hands-on education in design, control, and operation of manufacturing processes and systems. The curriculum provides a broad-based education in manufacturing, operations research and ergonomics through a base of mathematics, physical and engineering sciences, and laboratory and industrial experiences. It builds a strong foundation for the development of a professionally competent and versatile industrial engineer, able to function in a traditional manufacturing environment as well as in a much broader economy, including careers in financial services, communication, information technology, transportation, health care, consulting, or academia.

Program Educational Objectives:

We expect our graduates to:

- Participate in and lead cross-functionally defined project teams, designing, implementing and improving processes and systems in the manufacturing, service, or government sectors, using state-of-the-art tools and methodologies;
- Work effectively in managerial and leadership positions, to establish and execute engineering and business strategies;
- Work and communicate effectively with internal and external stakeholders in the global environment, while satisfying engineering, business and financial goals and the end customers; and
- Engage in continuous learning through varied work assignments, graduate school, professional training programs and independent study.

Program Outcomes (Student Outcomes):

These are the specific competencies that our students are taught through the curriculum offered by the department. Our students are expected to know and be able to demonstrate these outcomes by the time they graduate. These relate to the skills, knowledge and behaviors that students acquire as they progress through the program. These are related to the ABET Outcomes (a) through (k). They are listed below.

- 1.1 Analyze and design both the job and the worksite in a cost-effective manner, as well as measure the resulting output.
- 1.2 Understand and apply cognitive systems engineering: identify visual, auditory, cognitive, perceptual and environmental aspects of human performance; Perform task analysis and evaluate human-computer interfaces.
- 1.3 Understand information contained in typical specifications and methods of product verification and conformance to specifications.
- 1.4 Program flexible manufacturing equipment and system controllers; design logical manufacturing layouts and implement contemporary systems issues.
- 1.5 Perform work measurement: develop an MTM analysis and carry out a work sampling study.
- 1.6 Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- 1.7 Understand and apply principles of effective human/interface design to address improved human performance, visual displays and software design.
- 2.1 Ability to apply time value of money and select cost-effective engineering solutions; understand cost-accounting principles.
- 2.2 Ability to apply probability concepts to solve engineering problems, including reliability issues.
- 2.3 Ability to apply statistical concepts to solve real life problems, such as hypotheses testing, design of experiments and statistical quality control methods such as process capability and control charts.
- 2.4 Formulate, solve and analyze the results of linear programming models of real-world applications.
- 2.5 Formulate, solve and analyze real problems using Markov chains, network models, dynamic programming, queuing theory and inventory models.
- 2.6 Gain in-depth knowledge of data storage, analysis and visualization related to manufacturing and service domains.
- 2.7 Ability to create simulation models of manufacturing and service systems and analyze simulation output.
- 2.8 Ability to apply mathematical models to optimally design and control service systems.
- 3.1 Present engineering study results in technical reports and orally.
- 3.2 Demonstrate life-long learning by synthesizing information from several sources.
- 4.1 Work effectively in groups on case studies and projects.
- 4.2 Demonstrate knowledge of contemporary issues.
- 4.3 Understand professional and ethical responsibility.
- 4.4 Understand the impact of engineering decisions in a global and societal context.

After completing courses required for the core and fundamental competencies in the major, students can choose two technical elective courses from the department list, out of which must be an I E course. In addition, the students must also complete the three-credit capstone design course.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Industrial Engineering, a minimum of 129 credits is required. This baccalaureate program in Industrial Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 111 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (77 credits)

CHEM 110 GN(3) [11], CHEM 111 GN(1), EDSE 100(3), MATH 140 GQ(4) [11], MATH 141 GQ(4) [11], PHYS 211 GN(4) [11] (Sem: 1-2)
EMCH 210(5) [11], ENGL 202C GWS(3), MATH 220 GQ(2), MATH 231(2), MATH 250(3) [11], PHYS 212 GN(4) [11] (Sem: 3-4)
IE 302(3) [11], IE 305(3) [11], IE 322(3) [11], IE 323(3) [11], IE 327(3) [11], IE 330(3) [11], IE 405(3) [11], MATSE 259(3) (Sem: 5-6)
IE 425(3), IE 453(3), IE 460(3), IE 470(3), IE 480(3) (Sem: 7-8)

ADDITIONAL COURSES (16 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)

CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 1-2)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-2)

IE 408(3), IE 418(3), or IE 419(3) (Sem: 7-8) (*The courses not taken to satisfy this requirement can be taken as a track elective. Please see the department list*)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 3 credits as a science selection from department list (Sem: 3-4)

Select 6 credits as non-major electives from department list (Sem: 3-8)

Select 3 credits in manufacturing processes from department list. (Sem: 5-6) (*The course not taken to satisfy this requirement can be taken as a technical elective. Please see the department list*)

Select 6 credits of technical electives from the department list, out of which at least 3 credits must be I E credits.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-05-090

Review Date: 02/19/2013

R & T: Approved 5/24/2013

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

EN

Humanities

Capital College (HUMN)

Troy M. Thomas, Ph.D., *Program Coordinator, School of Humanities*

This major helps students appreciate, understand, and interpret relationships among the arts, ideas, media, and values that have shaped Western and world cultures. Students are taught to become active learners who can synthesize, interpret, and communicate knowledge and experience through writing, speaking, and creative expression in a variety of media. The School helps students meet these goals by offering a range of interdisciplinary and discipline-based courses in the arts, art history, communication studies, English, history, literature, music, philosophy, theatre, and writing. The course of study includes interdisciplinary courses which examine topics and time periods from the perspectives of multiple Humanities disciplines. These courses engage students in cross-disciplinary critical thinking and analysis and prepare them for work in an increasingly interdisciplinary world. Students also choose two Humanities subfields to investigate in greater depth, choosing from history and global cultures; the visual and performing arts; philosophy and religious studies; and literature and writing. Students are also encouraged to combine this major with a minor in such fields as business administration, writing, and communications. The Humanities major prepares students for careers in the arts, arts administration, business, corporate communications, government, teaching, museum work, and law, as well as providing a foundation for graduate study in a liberal arts field.

Entry to Major Requirements:

Entry to the Humanities major requires the completion of 27.1 or more credits and a 2.00 or higher cumulative grade-point average.

For a B.A. degree in Humanities, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS:

24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR:

51 credits
(At least 36 of the last 60 credits must be earned at Penn State, according to University Policy 83-80.)

PRESCRIBED COURSES (12 credits) [1]

HUM 100 GH(3), HUM 200 GH(3), HUM 300W(3), HUM 400(3) (Sem: 1-8)

ADDITIONAL COURSES (6 credits) [1]

Select 6 credits from Humanities (HUM) courses: HUM 150(3), HUM 311(3), HUM 410(3), HUM 430(3), HUM 453(3), HUM 460(3), HUM 461(3), HUM 491(3), HUM 494(3), HUM 495(3), HUM 496(3), HUM 497(3), HUM 499(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (33 credits)

(At least 15 credits of supporting courses must be at the 400 level.)

Select 12 credits in one of the four following areas; select 9 credits in a second area: (Sem: 1-8)

a. History and global cultures: select from HIST, CMLIT, SPAN (all courses with those prefixes), CAS 271 US:IL(3), ENGL 486 IL(3), ENGL 488 IL(3), INTST 100 GS:IL(3)

b. Performing and visual arts and art history: select from ART, ARTH, INART, MUSIC, THEA (all courses with those prefixes), COMM 215(3), COMM 241(3), COMM 242(3), COMM 250 GA(3)

c. Philosophy and religious studies: select from PHIL, RLST (all courses with those prefixes)

d. Literature and writing: select from ENGL, CMLIT (all courses with those prefixes), COMM 230(3), COMM 260W(3), COMM 332(3), COMM 346(3), COMM 474(3)

Select 12 credits from AMST, ART, ARTH, CAS, CHNS, CMLIT, COMM, ENGL, FR, HIST, HUM, INART, MUSIC, PHIL, RLST, SPAN, or THEA and/or 12 credits that can be used toward a minor in an area of the student's interests. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-05-026

Review Date: 02/24/2015

Coordinator updated: 05/19/16

CL

Interdisciplinary Business with Engineering Studies

Penn State Erie, The Behrend College (IBE)

This major provides students with an interdisciplinary program containing both business and engineering course content. The major includes a set of core courses in both business and engineering/engineering technology that should enable a graduate to function effectively in a technical business environment. In addition, a student will be able to choose, from a selection of modules, a set of courses or electives designed to enable a student to function in a specific business or technical area. The modules provide an entry-level set of skills that will help graduates provide immediate value as an employee. The modules or set of electives will be approved by both the Schools of Business and Engineering.

In addition to completing the broad-based core in business, science, and engineering, students acquire the ability to work as members of a team toward successful attainment of a common goal, preparing them to work in businesses or to further their study in graduate school. The program develops written and oral communication skills from an early stage and culminates in a capstone course sequence consisting of a project that stresses communication, strategic product development, and product realization.

Entrance to Major Requirements:

Entry to the Interdisciplinary Business with Engineering Studies (IBE) major requires the completion of 5 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); MATH 110 GQ(4) or MATH 140 GQ(4); STAT 200 GQ(4) or SCM 200(4), and a 2.00 or higher cumulative grade-point average.

For the B.S. degree in Interdisciplinary Business with Engineering Studies, a minimum of 127 credits are required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 106-107 credits

(This includes 24 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses, 6 credits of GS courses, 3 credits of GWS courses.)

PRESCRIBED COURSES: (65 credits)

CHEM 110 GN(3), CMPSC 201 GQ(3) [\[1\]](#), EGT 120(3) [\[1\]](#), ECON 102 GS(3) [\[1\]](#), EDSGN 100S(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), (Sem: 1-2)
ACCTG 211(4) [\[1\]](#), ENGL 202C GWS(3), PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 3-4)
ECON 104 GS(3) [\[1\]](#), FIN 301(3) [\[1\]](#), MGMT 301(3) [\[1\]](#), MIS 204(3) [\[1\]](#), MKTG 301(3) [\[1\]](#), SCM 301(3) [\[1\]](#) (Sem: 5-6)
MGMT 410(3) [\[1\]](#), MGMT 475(3) [\[1\]](#), MGMT 476(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES: (26 credits) [\[1\]](#)

EMCH 211(3) or MCHT 111(3), SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)
BA 241(2) and BA 242(2) or BA 243(4) (Sem: 3-6)
EE 211(3) or EET 101(3) (Sem: 5-6)
CMPET 117(3) or CMPEN 271(3) (Sem: 5-6)
EMCH 213(3) or MCHT 213(3) (Sem: 5-6)
ME 300(3) or MET 330(3) (Sem: 5-6)
Select 3 credits from ECON 470 IL(3), ECON 473 IL(3), FIN 471(3), MKTG 445 IL(3), MGMT 461 IL(3) or other 400-level international business course. (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS: (15-16 credits)

Select one module from School Approved List of Modules 1-5 (15-16 credits) (Sem: 5-8)

Except where noted, courses taken to satisfy General Education requirements may not be used to satisfy module requirements.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2010

Blue Sheet Item #: 39-01-057

Review Date: 08/24/2010

BD

Interdisciplinary Digital Studio

University Park, College of Arts and Architecture (IDS)

PROFESSOR GRAEME SULLIVAN, in charge

This degree represents an interdisciplinary approach to emerging technologies and the arts and design disciplines of the College of Arts and Architecture incorporating architecture, landscape architecture, graphic design, music, photography, theatre design, and visual arts. The IDS degree begins with a foundation in arts and design [ART 110(3), ART 111(3)] a two semester sequence of linked studio practice and theory courses that cover fundamental ideas and skills in the arts and design disciplines such as drawing, color theory, and 2-d, 3-d, and 4-d design within the context of art and design history and theory. The IDS program builds on this foundational core utilizing selected courses from across the College of Arts and Architecture. These courses range from digital fabrication to sound design and composition in music, theatre, and art, to digitally-based art explorations, to digital photography, to the exploration of virtual architectural and built environment spaces, to digital art and design theory and criticism, to internet exhibitions and publishing. Concurrent with these courses, students progress through the series of IDS studio courses (AA 110, 210, 310, 410 and 411) in which they will develop ways of learning that will enable them to understand how to work within collaborative professional environments. This will prepare students to meet the varying challenges they will face within client-based arts and design professions.

For the B.Des. Degree in Interdisciplinary Digital Studio, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(Up to 9 of these credits are included in the REQUIREMENTS FOR THE MAJOR. See description of General Education in the *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-3 credits

REQUIREMENTS FOR THE MAJOR: 82 credits

(This includes up to 6 credits of GA courses and 3 credits of GN courses)

PRESCRIBED COURSES (36 credits)[\[1\]](#)

AA 105(3), AA 106(3), AA 110(3), ART 11(1), ART 110(3), ART 111(3) (Sem: 1-2)

AA 210(3), ART 211Y US(3) (Sem: 3-4)

AA 310(3) (Sem: 5-6)

AA 410(4), AA 411(4), ART 476(3) (Sem: 7-8)

ADDITIONAL COURSES (40 credits)[\[1\]](#)

(Must include at least 6 credits at the 400 level)

Select 40 credits from ARCH 481(3), ART 101 GA(3), ART 201(3), ART 202(3), ART 203(3), ART 314(4), ART 315(4), ART 316(4), ART 318(4), ART 319(4), ART 343(4), ART 415(4), ART 416(4), ART 419(4), GD 100 GA(3), GD 200(3), INART 50 GN(3), INART 258A GA(3), LARCH 450(3), MUSIC 455(1-3), MUSIC 458(3), PHOTO 100 GA(3), PHOTO 200(3), PHOTO 300(4), PHOTO 400(4), PHOTO 402(4), THEA 285(3), THEA 484(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)[\[1\]](#)

Select 6 credits from ART 220(3), ART 411 US(3), ARTH 450 US;IL(3), ARTH 470 US;IL(3), ARTH 250(3) or PHOTO 201(3), INART 55 GA(3) (Sem: 3-8)

A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy

Last Revised by the Department: Fall 2015

Blue Sheet Item #: 44-01-031

Review Date: 9/15/2015

AA

Industrial Engineering

Penn State Erie, The Behrend College (IESBD)

The undergraduate program in industrial engineering, being the first established in the world, has a long tradition of providing a strong, technical, hands-on education in design, control, and operation of manufacturing processes and systems. The curriculum provides a broad-based education in manufacturing, operations research and ergonomics through a base of mathematics, physical and engineering sciences, and laboratory and industrial experiences. It builds a strong foundation for the development of a professionally competent and versatile industrial engineer, able to function in a traditional manufacturing environment as well as in a much broader economy, including careers in financial services, communication, information technology, transportation, health care, consulting, or academia.

We expect our graduates to:

1. Participate in and lead cross-functional teams, designing, implementing and improving processes and systems in the manufacturing, service, or government sectors;
2. Work effectively in managerial and leadership positions;
3. Work and communicate effectively with internal and external team members in the global environment; and
4. Engage in continuous learning through varied work assignments, graduate school, professional training programs, and independent study.

The following outcomes are included in the courses taught in the program:

1. Management and Information Systems for Industrial Engineering: apply time value of money to make financial decisions and understand cost-accounting principles; understand probability concepts applicable to solve engineering problems; including reliability issues; conduct tests of hypotheses, create regression models and understand and apply statistical quality control methods such as process capability and control charts; formulate, solve and analyze real problems using Markov chains, network models, dynamic programming, queuing theory and inventory models; create simulation models of manufacturing and service systems and analyze simulation output; and gain an in-depth knowledge of implementation-related issues and theoretical aspects of database and Web-based operations related to industrial engineering.
2. Manufacturing Engineering: understand information contained in typical specifications and methods of product verification and conformance to specifications; and program flexible manufacturing equipment and system controllers; design logical manufacturing layouts and implement contemporary systems issues.
3. Human Factors: analyze and design both the job and the work site in a cost-effective manner, as well as measure the resulting output; understand and apply cognitive systems engineering: identify visual, auditory, perceptual and environmental aspects of human performance, perform task analysis and evaluate human-computer interfaces; and perform work measurement, develop an MTM analysis and carry out a work sampling study.
4. General: present engineering study results in technical reports and in oral presentations, demonstrate life-long learning by synthesizing information from several sources, work effectively in groups on case studies and projects, demonstrate knowledge of contemporary issues, understand professional and ethical responsibility and the impact of engineering decisions in a global and societal context; and design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability.

After completing courses required for the core and fundamental competencies in the major, students can choose two technical elective courses from the department list, out of which must be an I E course. In addition, the students must also complete the 3-credit capstone design course.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ) and PHYS 211 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Industrial Engineering, a minimum of 129 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 111 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (77 credits)

CHEM 110 GN(3) [1], CHEM 111 GN(1), EDSGN 100(3), MATH 140 GQ(4) [1], MATH 141 GQ(4) [1], PHYS 211 GN(4) [1] (Sem: 1-2)
EMCH 210(5) [1], ENGL 202C GWS(3), MATH 220 GQ(2-3), MATH 231(2), MATH 250(3), PHYS 212 GN(4) (Sem: 3-4)
IE 302(3) [1], IE 305(3) [1], IE 322(3) [1], IE 323(3) [1], IE 327(3) [1], IE 330(3) [1], IE 405(3) [1], MATSE 259(3) (Sem: 5-6)
IE 425(3), IE 453(3), IE 460(3), IE 470(3), IE 480(3) (Sem: 7-8)

ADDITIONAL COURSES (16 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 1-2)
ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-2)
IE 408(3), IE 418(3), or IE 419(3) (Sem: 7-8) *(The course not taken to satisfy this requirement can be taken as a track elective. Please see the list in (iv) of section C.)*

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 3 credits as a science selection from department list (Sem: 3-4)
Select 6 credits as non-major electives from department list (Sem: 3-8)
Select 3 credits in manufacturing processes from department list. (Sem: 5-6) *(The courses not taken to satisfy this requirement can be taken as a technical elective. Please see the department list)*
Select 6 credits of technical electives from the department list, out of which at least 3 credits must be I E credits.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2009

Blue Sheet Item #: 37-06-041

Review Date: 4/14/09

Immunology and Infectious Disease

University Park, College of Agricultural Sciences (IID)

PROFESSOR PAMELA HANKEY, Program Coordinator

Immunology is the study of how animals and humans protect themselves from pathogens. Understanding basic mechanisms of immunity provides insights into how blood cells develop and how pathogens are recognized and attacked. Furthermore, understanding the concepts behind immunology is necessary for drug and vaccine design. Dysregulation of the processes that regulate immunity can contribute to uncontrolled inflammation, tissue destruction, autoimmunity, immunodeficiencies, leukemia and related cancers. Immunology includes a broad range of disciplines including but not limited to microbiology, virology, animal health, genetics, biochemistry, molecular and cell biology. Students enrolled in the Immunology and Infectious Disease Major will develop and understanding of normal immune responses to bacterial, fungal, and viral agents and appreciate the potential pathological outcomes of these responses. Students will learn about events that shape the immune response; the general biology of pathogens and the mechanisms by which they cause disease. In addition, basic skills in microbiology, molecular biology and biochemistry will be acquired. Students completing a B.S. degree in Immunology and Infectious Disease will be well prepared for veterinary, medical or other professional schools, Ph.D. graduate training in a wide variety of areas including immunology, microbiology, virology, molecular medicine, animal science, molecular biology and biochemistry or highly competitive jobs as research technicians, laboratory assistants or sales representatives with a pharmaceutical company.

In order to be eligible for entrance to the Immunology and Infectious Disease major, a student must have: (1) attained at least a 2.00 cumulative grade point average and (2) completed BIOL 110 GN(4) [\[1\]](#), BIOL 230W GN(4) [\[1\]](#), BIOL 220W GN(4) [\[1\]](#) or BIOL 240W GN(4) [\[1\]](#), CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), CHEM 112 GN(3) [\[1\]](#), CHEM 113 GN(1) [\[1\]](#), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#) and earned a grade of C or better in each of these courses

For the B.S. degree in Immunology and Infectious Disease, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 7-10 credits

REQUIREMENTS FOR THE MAJOR: 89-91 credits

(This includes 15 credits of GENERAL EDUCATION courses: 9 credits of GN courses; 6 credits of GQ courses)

PRESCRIBED COURSES (60 credits)

B M B 401(3) [\[1\]](#), B M B 402(3) [\[1\]](#), BIOL 110 GN(4) [\[1\]](#), BIOL 230W GN(4) [\[1\]](#), CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), CHEM 112 GN(3) [\[1\]](#), CHEM 113 GN(1) [\[1\]](#), CHEM 210(3), CHEM 212(3), CHEM 213(2), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), MICRB 201(3) [\[1\]](#), MICRB 202(2) [\[1\]](#), MICRB 410(3) [\[1\]](#), PHYS 250 GN(4), PHYS 251 GN(4), VBSC 211 GN(3) [\[1\]](#), VBSC 448(3) (Sem: 1-8)

ADDITIONAL COURSES (20-22 credits)

Select 4 credits from BIOL 220W GN(4) [\[1\]](#) or BIOL 240W GN(4) [\[1\]](#) (Sem: 2-3)

Select 3-4 credits from STAT 200 GQ(4), STAT 240 GQ(3), STAT 250 GQ(3) (Sem: 3-4)

Select 3 credits from VBSC 444(3) [\[1\]](#) or BBH/HPA 440(3) [\[1\]](#) (Sem: 5-8)

Select 10-11 credits from VBSC 418(2) [\[1\]](#), VBSC/MICRB/BMB 432(3) [\[1\]](#), VBSC/MICRB 435(2) [\[1\]](#), VBSC 445(3) [\[1\]](#), VBSC 451(3) [\[1\]](#) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits of 400-level courses from departmental list [\[1\]](#) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lasted Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-006

Review Date: 04/08/2014

UCA Revision #1: 8/8/06

HH

Program Coordinator updated: 6/19/12

Integrative Arts

Abington College (IARAB)
 Altoona College (IARAL)
 University Park, College of Arts and Architecture (INART)

PROFESSOR JANET HARTRANFT, Ph.D., Program Coordinator, University Park

Integrative Arts is an interdisciplinary major available to students who desire a curriculum that crosses over traditional single discipline lines. The Integrative Arts student initially establishes an academic plan with the assistance of an approved adviser. The plan must contain a core component of 42 credits and an elective component of 15 credits. The two components combined must clearly illustrate that the plan has clarity, purpose, and cohesion. All Integrative Arts students must complete 6 credits of history of the arts. These credits may be counted as a part of the major or, if outside the major, may be counted under General Education and/or Bachelor of Arts degree requirements. Consult with advisor for course selection.

For the B.A. degree in Integrative Arts, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
 (6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
 (Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
 (Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
 (Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
 (3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
 (See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 42 credits
 (This includes 6 credits of General Education courses: 6 credits of GA)

SUPPORTING COURSES AND RELATED AREAS: 42 credits^[1]
 (Must include at least 15 credits at the 400 or equivalent level)
 (Must include 6 credits in History of the Arts)

Select 24 credits from an arts area (Sem: 1-8)
 Select 12 credits from other arts areas (Sem: 1-8)
 Select 6 credits of GA (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-03-010

Review Date: 11/13/2012

Information Systems

Capital College (INFSY)

JANE S. KOCHANOV, *Director of Undergraduate Studies, School of Business Administration*

This major prepares students to enter rapidly expanding fields associated with technology. This includes programming, systems analysis and design, database administration, network management, support services and training, and management of information resources. Students obtain competence both in information technology and in business theory. Thus, the curriculum combines technical content with managerial aspects of information systems. Each student's background is complemented with basic business instruction in accounting, marketing, management, and finance. With business and non-business electives, the program is designed to develop necessary skills to be an effective Information Systems employee. Because the Harrisburg area is the center of industry and economic development for South Central Pennsylvania, students are provided with many opportunities to experience the exciting and challenging world of business.

Students will obtain:

- Knowledge in technologies that support the information environment.
- Knowledge in business or organizational processes that are supported by technology.
- General skills and abilities that promote good communication, problem-solving and analytical abilities, and the ability to work in a team environment.
- Skills to participate in and lead multidisciplinary teams in the development, implementation, and management of information technology solutions.

The program meets the objectives through varied experiences and an emphasis on good communication skills.

Entry to Major Requirements:

Entry to the Information Systems major requires the completion of 8 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); FIN 301(3); MATH 110 GQ(4) or MATH 140 GQ(4); MGMT 301(3); MKTG 301(3); SCM 200 GQ(4) or STAT 200 GQ(4); and a 2.00 or higher cumulative grade-point average. Additional information about this major is available in the office of the Director of Undergraduate Studies, School of Business Administration at Penn State Harrisburg.

For a B.S. in Information Systems, a minimum of 120 credits is required. Consistent with Senate policy, at least 24 credits of course work in the major and the capstone course must be completed at the Capital College to earn the degree.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education Course Requirements in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 8 credits

REQUIREMENTS FOR THE MAJOR: 79 credits

(This includes 12 credits of General Education courses: 3 credits of GWS courses; 3 credits of GS courses; 6 credits of GQ courses)

PRESCRIBED COURSES (49 credits)

ACCTG 211(4) (Sem: 1-4)

ECON 102 GS(3), FIN 301(3), MGMT 301(3), MKTG 301(3) (Sem: 1-4)

ENGL 202D GWS(3) (Sem: 3-4)

BA 364 US;IL(3), BA 462(3), ECON 104 (3), MIS 204(3), MIS 307(3)[\[1\]](#), MIS 390(3)[\[1\]](#), MIS 448(3)[\[1\]](#), MIS 450(3)[\[1\]](#), MIS 465(3)[\[1\]](#), SCM 301(3) (Sem: 5-8)

ADDITIONAL COURSES (24 credits)

Select 3 credits from CMPSC 101 GQ(3) or CMPSC 121 GQ(3) or IST 140(3) (Sem: 1-4)

Select 4 credits from MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-4)

Select 4 credits from SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-4)

Select 4 credits from BA 243(4) or BA 241(2) and BA 242(2) (Sem: 5-6)

Select 9 credits from one of the following three areas of concentration A, B, or C:

A. Application Development Concentration

IST 302(3)[\[1\]](#); MIS 413(3)[\[1\]](#); MIS 466(3)[\[1\]](#); MIS 489(3)[\[1\]](#) (Sem: 5-8).

B. Network Security Concentration

IST 302(3)[\[1\]](#); IST 451(3)[\[1\]](#); IST 456(3)[\[1\]](#); MIS 489(3)[\[1\]](#) (Sem: 5-8)

C. Individualized Concentration

IST 302(3)[\[1\]](#); IST 451(3)[\[1\]](#); IST 456(3)[\[1\]](#); MIS 413(3)[\[1\]](#); MIS 446 (3)[\[1\]](#); MIS 461(3)[\[1\]](#); MIS 466(3)[\[1\]](#); MIS 489(3)[\[1\]](#) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from 200-400 level business courses from: ACCTG, BA, ECON, FIN, MGMT, MIS, MKTG, or SCM in consultation with an academic adviser and in support of the student's interests. (Sem: 3-8)

Integrated B.S. in Information Systems and M.B.A. in Business Administration

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Information Systems and Master of Business Administration degrees. The total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program. Students in the IUG program take five additional credits in their third year, and five fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

Students have the choice of receiving the B.S. in Information Systems degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been

satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

ADMISSION REQUIREMENTS

To initiate the application process, students must submit a resume, a personal statement including career goals and how MBA will enhance their career goals, transcripts of courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Typical students would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211(4), ECON 102(3), ENGL 15 or 30(3), FIN 301(3), MATH 110 or 140(4), MGMT 301(3), MKTG 301(3) and STAT 200(4) or SCM 200(4).

To formally apply, students must submit a completed graduate school application. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Students applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

DEGREE REQUIREMENTS

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science in Information Systems and Master of Business Administration degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. All courses counted for both degrees must be at the 500- or 800-level.

Integrated B.S. in Information Systems/MSIS Program

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Information Systems candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Information Systems and the Master of Science in Information Systems. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Information Systems and Master of Science in Information Systems degrees. The total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program. Students in the IUG program take five additional credits in their third year, and five fewer credits in their fourth year. The courses that count toward the Master of Science in Information Systems degree requirements are included in the fourth year.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

Students have the choice of receiving the B.S. in Information Systems degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Science in Information Systems degree, the students will be permitted to receive the Bachelor of Science in Information Systems degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

Admission Requirements

To initiate the application process, students must submit a resume, a personal statement including career goals and how MBA will enhance their career goals, transcripts of courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MSIS Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Typical students would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211 [4], ECON 102 [3], ENGL 15 or 30 [3], FIN 301 [3], MATH 110 or 140 [4], MGMT 301 [3], MKTG 301 [3] and STAT 200 [4] or SCM 200 [4].

To formally apply, students must submit a completed graduate school application. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

Degree Requirements

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science in Information Systems and Master of Science in Information Systems degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. All courses counted for both degrees must be at the 500- or 800-level.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Reviewed by the Department: Fall 2017

Blue Sheet Item #:46-03-006A

Review Date:11/14/2017

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

CL

International Business

Penn State Erie, The Behrend College (INT B)

The International Business major is designed to prepare students for the increasingly international nature of business. Compared to other business majors, this one provides greater emphasis on knowledge and skills that are needed to conduct business in an international setting. This includes issues concerned with accomplishing organizational objectives through the coordination of human, material, information, and financial resources across national boundaries. In addition to studying the core business courses, students in this major will receive a broad exposure to the complexity of international business through required course work in international business, international culture, a foreign language, and a study abroad experience. In addition to preparing students for an international business environment, the major aims to provide them with knowledge of a specific business discipline by requiring the completion of all the requirements for a second business major. As a result, students meet the University requirements for a concurrent major. Graduates of the INT B major should be better prepared to function effectively as employees of small businesses with developing international operations or as members of larger business organizations with extensive global operations.

Entrance to Major Requirements:

Entry to the International Business major requires the completion of 5 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); MATH 110 GQ(4) or MATH 140 GQ(4); STAT 200 GQ(4) or SCM 200(4), and a 2.00 or higher cumulative grade-point average.

For the B.S. degree in International Business (in conjunction with a second business major), a minimum of 122 credits is required.

Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION and REQUIREMENTS FOR THE MAJOR course selections)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR course selections)

ELECTIVES: 1 credit

REQUIREMENTS FOR THE MAJOR: 91 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses, 6 credits of GS courses, 3 credits of GWS courses.)

PRESCRIBED COURSES (31 credits)

ACCTG 211(4), ECON 102 GS(3), ECON 104 GS(3), ENGL 202D GWS(3) (Sem: 3-4)

FIN 301(3)[1], MGMT 301(3)[1], MIS 204(3), MKTG 301(3)[1], SCM 301(3)[1] (Sem: 3-6)

MGMT 471W(3)[1] (Sem: 7-8)

ADDITIONAL COURSES (24 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

BA 241(2) and BA 242(2) or BA 243(4) (Sem: 3-6)

Select 12 credits from ECON 470 IL(3)[1], ECON 473 IL(3)[1], FIN 471(3)[1], MGMT 461 IL(3)[1], MKTG 445 IL(3)[1], or other 300- or 400-level international business course [1] in consultation with adviser (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (36 credits)

Select 15 credits in a foreign language and culture (Sem: 1-6)

Select a minimum of 18 credits from one business supporting course group in consultation with adviser. Students must complete the requirements for a second School of Business major (Sem: 5-8)

Select 3 credits from school-approved, non-business Education Abroad courses (Sem: 5-8)

[Note: Students must attain third-level proficiency in a single foreign language (0-12 credits) and select 3-15 credits from the school-approved list of non-business international courses. See general information section of the *Bulletin* for the Penn State placement policy on foreign languages. Students receiving advanced placement in foreign language may substitute courses from school-approved foreign language and culture course list to complete the credits for this requirement.]

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2010

Blue Sheet Item #: 39-01-058

Review Date: 08/24/2010

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

BD

International Politics

University Park, College of the Liberal Arts (INTPL)
World Campus

PROFESSOR LEE ANN BANASZAK, Head

This major, administered within the Department of Political Science, is designed to provide students with a broad, comprehensive education in international politics by offering students options in International Relations, International Political Economy, and Security Studies. While most of the required courses are in the areas of international and comparative politics, the curriculum includes courses in economics, geography, risk analysis, and history. The major provides an opportunity to study in detail a variety of crucial contemporary issues--conflict among and within nations, democratization, economic and political globalization, regional conflicts and the emerging importance of non-state actors--as well as analysis of foreign and economic policy making and security issues in the United States and other nations.

The major prepares students for career opportunities with U.S. government executive agencies dealing with foreign affairs, international and homeland security, and the international economy; with relevant committees of the U.S. Congress; with multinational corporations, banks, and consulting firms; and with international organizations. The major also provides preparation for law and business schools and for graduate study in political science and international relations.

For the B. A. degree in International Politics, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-3 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 15-18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 39 credits [\[1\]](#)

(This includes 0-3 credits of GS General Education courses.)

REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 9 credits

PRESCRIBED COURSES (3 credits)

PLSC 14 GS;IL(3) (Sem: 1-4)

ADDITIONAL COURSES (6 credits)

PLSC 1 GS(3) or PLSC 7 GS(3)* (Sem: 1-4)

* PLSC 7 is recommended for students choosing the National Security Option

Select 3 credits from PLSC 3 GS;IL(3), PLSC 20 GS;IL(3), PLSC 22 GS;IL(3) (Sem: 1-4)

REQUIREMENTS FOR THE OPTION: 30 credits

INTERNATIONAL RELATIONS OPTION: (30 credits)

ADDITIONAL COURSES (18 credits)

Select 3-6 credits (no more than 3 credits may be below the 300 level) from HIST 120 GS;IL(3), HIST 142 GS;IL(3), HIST 143 GH;IL(3), HIST 144 GH;US;IL(3), HIST 173 GH;IL(3), HIST 175 GH;IL(3), HIST 179 GH;IL(3), HIST 181 GH;IL(3), HIST 192 GH;IL(3), HIST 320(3), HIST 420 IL(3), HIST 423 IL(3), HIST 427 IL(3), HIST 430 IL(3), HIST/AFAM 431 US;IL(3), HIST/AFAM 432 IL(3), HIST 434 IL(3), HIST 435 (3), HIST 446 US(3), HIST 447 US(3), HIST 452 US;IL(3), HIST 454 US(3), HIST 460 US;IL(3), HIST 467 US;IL(3), HIST 468 IL(3), HIST 473 IL(3), HIST 479 IL(3), HIST 481 IL(3), HIST 486 IL(3) (Sem: 1-8)

Select 3-6 credits (no more than 3 credits may be below the 300 level) from ECON 102 GS(3), ECON 104 GS(3), ECON 333 GS(3) or IB 303 IL(3) (Sem: 1-8)

Select 3-6 credits (no more than 3 credits may be below the 300 level) from GEOG 123 GS;IL(3), GEOG 124 GS;IL(3), GEOG 128 GS;IL(3), GEOG 364(3), GEOG 424 US;IL(3), GEOG 428 US(3), GEOG 430(3), GEOG 431(3), GEOG 438W(3), GEOG 444(3), GEOG 463(3), GEOG 464(3), GEOG 468(3) (Sem: 1-8)

Select 6 credits 3 credits from PLSC 412(3) or PLSC 481(3) and 3 credits from PLSC 418(3) or PLSC 442(3) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (12 Credits)

Select 12 credits from 400-level political science courses in International Relations, Comparative Politics, or Theory/Methodology (excluding courses taken to fulfill other requirements in the major) from an approved department list in consultation with an adviser. (Sem: 3-8)

and/or:

Select 12 credits of foreign language courses beyond the 12th-credit level (9 of these credits must be at the 400 level. With adviser approval, all 12 credits may be below the 400 level, but must be in addition to the language proficiency for BA requirements) (Sem: 3-8)

NATIONAL SECURITY OPTION: (30 credits)

PRESCRIBED COURSES (9 credits)

CRIM 406(3), SRA 111 GS(3), SRA 211(3) (Sem: 4-8)

ADDITIONAL COURSES (9 credits)

Select 3 credits from ECON 102 GS(3), ECON 104 GS(3), ECON 333 GS(3) or IB 303 IL(3), GEOG 123 GS;IL(3), GEOG 124 GS;IL(3), GEOG 128 GS;IL(3), GEOG 364(3), GEOG 424 US;IL(3), GEOG 428 US(3), GEOG 430(3), GEOG 431(3), GEOG 438W(3), GEOG 444(3), GEOG 463(3), GEOG 464(3), GEOG 468(3), HIST 120 GS;IL(3), HIST 142 GS;IL(3), HIST 143 GH;IL(3), HIST 144 GH;US;IL(3), HIST 173 GH;IL(3), HIST 175 GH;IL(3), HIST 181 GH;IL(3), HIST 192 GH;IL(3), HIST 320(3), HIST 420 IL(3), HIST 423 IL(3), HIST 427 IL(3), HIST 430 IL(3), HIST/AFAM 431 US; IL(3), HIST/AFAM 432 IL(3), HIST 434 IL(3), HIST 435 IL(3), HIST 446 US(3), HIST 447 US(3), HIST 452 US;IL(3), HIST 454 US(3), HIST 460 US;IL(3), HIST 467 US;IL(3), HIST 468 IL(3), HIST 473 IL(3), HIST 479 IL(3), HIST 481 IL(3), HIST 486 IL(3) (Sem: 1-8)

Select 6 credits from PLSC 412(3), PLSC 418(3), PLSC/CRIMJ 439(3), PLSC 442(3), PLSC 481(3) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (12 Credits)

Select 12 credits from 400-level political science courses in International Relations, Comparative Politics, or Theory/Methodology (excluding courses taken to fulfill other requirements in the major) from an approved department list in consultation with an adviser. (Sem: 3-8)

and/or:

Select 12 credits of foreign language courses beyond the 12th-credit level (9 of these credits must be at the 400 level. With adviser approval, all 12 credits may be below the 400 level, but must be in addition to the language proficiency for BA requirements) (Sem: 3-8)

INTERNATIONAL POLITICAL ECONOMY OPTION: (30 credits)

ADDITIONAL COURSES (18 credits)

Select 6 credits : 3 credits from PLSC 412(3) or PLSC 481(3) and 3 credits from PLSC 418(3) or PLSC 442(3) (Sem: 4-8)

Select 9 credits (no more than 3 credits may be below the 300 level) from ECON 102 GS(3), ECON 104 GS(3), ECON 333 GS(3), ECON 433(3), ECON 434(3), ECON 443(3), ECON 444(3), ECON 451(3), ECON 471(3), ECON 472(3), IB 303 IL(3) (Sem: 1-8)

Select 3 credits from GEOG 123 GS;IL(3), GEOG 124 GS;IL(3), GEOG 128 GS;IL(3), GEOG 364(3), GEOG 424 US;IL(3), GEOG 428 US(3), GEOG 430(3), GEOG 431(3), GEOG 438W(3), GEOG 444(3), GEOG 463(3), GEOG 464(3), GEOG 468(3) (Sem: 1-8)

AFAM/ HIST 431 US; IL (3), HIST 120 GS;IL(3), HIST 142 GS;IL(3), HIST 143 GH;IL(3), HIST 144 GH;US;IL(3), HIST 173 GH;IL(3), HIST 175 GH;IL(3), HIST 179 GH;IL(3), HIST 181 GH;IL(3), HIST 192 GH;IL(3), HIST 320(3), HIST 420 IL(3), HIST 423 IL(3), HIST 427 IL(3), HIST 430 IL(3), HIST/AFAM 432 IL(3), HIST 434 IL(3), HIST 435 IL(3), HIST 446 US(3), HIST 447 US(3), HIST 452 US;IL(3), HIST 454 US(3), HIST 460 US;IL(3), HIST 467 US;IL(3), HIST 468 IL(3), HIST 473 IL(3), HIST 479 IL(3), HIST 481 IL(3), HIST 486 IL(3) (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from 400-level political science courses in International Relations, Comparative Politics, or Theory/Methodology (excluding courses taken to fulfill other requirements in the major) from an approved department list in consultation with an adviser. (Sem: 3-8)

Integrated Undergraduate/Graduate (IUG) Degree Program B.A. in International Politics and Master's in International Affairs (M.I.A.)

The integrated undergraduate-graduate (IUG) degree program (B.A. in International Politics/M.I.A. in International Affairs) will provide an opportunity for strong students in International Politics to complete a Master's degree with 5 total years of study.

The demand for graduate training in international affairs will grow significantly in the near future along with the burgeoning requirements for international knowledge and professional experience in commerce, humanitarian service, and public affairs. The career choices for graduates with this training will also expand sharply. The integrated degree program would prepare students for a variety of careers requiring an interdisciplinary background in politics and international affairs. Examples of types of entities hiring in these areas are federal, state, and local governments, international organizations, multinational corporations, international banking and financial institutions, media organizations and journalism, consulting firms, policy research centers, and development assistance programs and foundations.

The IUG degree in International Affairs and International Politics is both timely and consistent with the tradition of interdisciplinary studies at other schools of international affairs. It will also strengthen the School of International Affairs' existing collaborations and interactions with the College of the Liberal Arts.

Admission Requirements

The number of openings in the integrated B.A./M.I.A. program is limited. Admission will be selective based on specific criteria set by the School of International Affairs. Students shall be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study.

Specific requirements:

1. Must be enrolled in the International Politics B.A. program.
2. Must apply to and be accepted without reservation into The Graduate School and the M.I.A. program in the School of International Affairs. Students must complete the [Graduate School application](#). All applicants will submit GRE scores, two letters of recommendation and a personal statement addressing their reasons for pursuing a graduate degree in international affairs and discussing their plans and goals.
3. Although the program has no fixed minimum grade-point average, an applicant is generally expected to have a minimum overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
4. Must include a plan of study identifying undergraduate credits to be applied to the M.I.A. degree elective requirements.
5. Must provide written endorsement from the head of the undergraduate program/department.

M.I.A. Requirements for the Integrated B.A./M.I.A.

The M.I.A. portion of the integrated B.A./M.I.A. will require the completion of a **minimum of 42 credits at the 400 level or higher**, at least 18 of which are from six core courses consisting of INTAF 801(3), 802(3), 803(3), 804(3), 506(3) and INTAF 590(3). The remaining credits are attained through completion of the approved elective courses.

In addition to the core curriculum and elective courses, M.I.A. degree candidates must complete either: (i) a master's paper; or (ii) a supervised internship placement. If the first option is chosen and the candidate opts to complete a paper, he/she must complete 3 credits of INTAF 594. The master's paper will involve integrating and showing mastery of the subject matter of the student's curricular emphasis, and may also involve original research. If the second option is chosen, the candidate will complete 3 credits of INTAF 595. The student will participate in a supervised internship of sufficient depth and professionalism that will allow the student to experience the integration of his/her curricular studies in an actual professional environment. A reflective paper will be submitted as a part of this credit requirement.

In order to graduate, M.I.A. degree students also will need to demonstrate proficiency in a language other than English. Proficiency will be defined as follows: (i) four semesters of a Penn State language sequence or its equivalent (15 credits with a quality grade of C or better using a 4.0 scale); (ii) native acquisition, as shown by the candidate's personal history and approved by the SIA faculty; or (iii) performance on a proficiency evaluation sufficient to equal four semesters of language learning: for this purpose, either Penn State's proficiency certification process or another pre-approved proficiency assessment may be used. Language study does not provide credits towards the degree.

M.I.A Degree Core Courses (18) INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3) Electives (21) Course choices are from a pre-approved list in the SIA, or by SIA faculty approved substitution Capstone (3) Master's Paper (INTAF 594) or Internship (INTAF 595) Total Degree Credits (42)	Integrated B.A./M.I.A. Degree Core Courses (18) INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3) Electives (21) The following 12 credits may be double counted toward the B.A. and the M.I.A.: PLSC 415(3), PLSC 441(3), PLSC 550(3), PLSC 554(3). Capstone (3) Master's Paper (INTAF 594) or Internship (INTAF 595) Total Degree Credits (42)
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Sample Program of Study

A typical sequence of coursework for a student in the IUG program would appear as follows:

Year One:	International Politics	PLSC 3; PLSC 14 or PLSC 20
Year Two:	International Politics	PLSC 1 or PLSC 7; ECON 102 or ECON 104; lower-level history course
Year Three:	International Politics	Lower-level GEOG; GEOG/HIST or ECON requirement; PLSC 439 or PLSC 442 or other supporting course in PLSC
Year Four:	Fall Semester	INTAF 801, INTAF 802 and INTAF 803 are required. Additional 400-level PLSC, related course(s), or HIST/GEOG/Economics course(s) may be taken.
	Spring Semester	INTAF 804, INTAF 506 and INTAF 590 are required. Additional 400-level PLSC, related course(s), or HIST/GEOG/Economics course(s) may also be taken.
Year Five:	24 credits	The following 12 credits may be double counted toward the B.A. and the M.I.A.: PLSC 415(3), PLSC 441(3), PLSC 550(3), PLSC 554(3).

Tuition Charges, Grant-in-Aid and Assistantships

Students admitted to the School of International Affairs through the IUG with International Politics may be considered to receive financial assistance.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-03-080

Review Date: 11/19/2013

UCA Revision #2: 7/27/07

LA

Dept head last updated by Publications: 4/20/10

Integrated Social Sciences

University Park, College of the Liberal Arts (ISOSC): offered via World Campus

Paul C. Taylor, Professor in Charge

The social sciences are concerned with the study of society and the relations among individuals and institutions within society. The multi-disciplinary Bachelor of Science in Integrated Social Sciences synthesizes the broad sweep of the content, theories, and methodologies of the social sciences. The program draws on core social science disciplines: Anthropology, Communication Arts and Sciences, Economics, Political Science, Psychology, and Sociology. A final capstone portfolio will document integration and synthesis of major themes explored in the program.

Upon completing the program of study, students should be able to articulate the varied theoretical and applied methodologies and interrelationships across the social sciences; communicate effectively using the language and constructs of the social sciences; apply critical thinking in analyzing and applying social science perspectives to society's problems; demonstrate the ability to understand, evaluate, and critique the results of social science quantitative and qualitative research; formulate, debate, and articulate arguments about social phenomena; and recognize and solve ethical dilemmas in social contexts.

For the B.S. degree in Integrated Social Sciences, a minimum of 120 credits is required.

Per Senate Policy 83-80.1, "Per University Faculty Senate Policy 83-80.1, every candidate for a degree shall earn as a degree candidate at least 36 of the last 60 credits required for a baccalaureate degree in courses offered by the University or in cooperative degree programs that have been established by formal agreement and approved by the University Faculty Senate."

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in the ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 20-42 credits

REQUIREMENTS FOR THE MAJOR: 51-55 credits [1]

(This includes 0-18 credits of General Education courses: 0-6 credits of GQ courses; 0-6 credits of GS courses, and 0-6 credits of GH courses)

PRESCRIBED COURSES (6 credits)

LA 201(3) (Sem: 5-6)

LA 496(3) (Sem: 8)

ADDITIONAL COURSES (15-19 credits)

In consultation with your adviser, select 6-8 credits in quantification from MATH, CMPSC, IST, PHIL, ACCT, or STAT (Sem: 1-2)

Select 3-4 credits in statistics from the following courses: STAT 200 GQ(4); PSYCH 200 GQ(4); or PLSC 309(3) (Sem: 2-3)

Select 3 credits in ethics from the following courses: PHIL 103 GH(3); PHIL 103W GH(3); PHIL 119 GH(3); or LER 460(3) (Sem: 1-2)

Select 3-4 credits in research methods from the following courses: SOC 207(3); PSYCH 301(4); CAS 390 GS(3); or LER 312(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (30 credits)

In consultation with your adviser, select 30 credits from social science courses in the following areas: ANTH, CAS, ECON, PLSC, PSYCH, or SOC; or LA 295, LA 395, or LA 495. Students must select at least 15 credits at the 400 level; 9 credits of the 400-level courses must be in one discipline and 6 credits must be in a second discipline. (Sem:5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-099

Review Date: 04/14/2015

Information Sciences and Technology

Abington College (ISSAB)

Berks College (ISSBL)

Capital College (ISSCA)

University College: Penn State Beaver, Penn State Brandywine, Penn State Greater Allegheny, Penn State Hazleton, Penn State New Kensington, Penn State Lehig Valley, Penn State Mont Alto, Penn State Schuylkill, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York (ISSCC)

World Campus (ISSWC_BS)

University Park, College of Information Sciences and Technology (ISTBS)

Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies, College of IST

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

This major is structured to provide students with the theoretical frameworks and skill sets necessary to compete and be productive in the information technology-intensive global context that defines the new "Information Age." Specifically, the degree will be focused on a program that will build an understanding of core information technologies and related areas of study; will prepare students for the practical application of various information sciences and related technologies; and engage students in sharpening their abilities to think critically and to work in teams. All this will be done with considerable interdisciplinary integration in order to expose students to the cognitive, social, institutional, and global environments of IST. Team projects in most courses, a required internship, and a senior capstone experience provide additional, focused venues for involving students in the cutting-edge issues and technologies of the field.

INFORMATION CONTEXT: PEOPLE, ORGANIZATIONS, AND SOCIETY OPTION: This option focuses on how information technology affects social change and the delivery of information to the consumer. This includes the human-machine interface; organization and retrieval of information; digital libraries; information and telecommunications services; information and media industry structures; software services and intermediaries; telecommunications and information law and policy; sociological aspects of technology change; multimedia; and art, design, and aesthetics.

INFORMATION SYSTEMS: DESIGN & DEVELOPMENT OPTION: This option is focused on expanding the skills needed to develop advanced information technology systems using state-of-the-art tools and techniques. The emphasis is on providing the student with both knowledge in the design, implementation, testing and evolution of complex software systems as well as a set of project-oriented, team-programming experiences.

INFORMATION TECHNOLOGY: INTEGRATION & APPLICATION OPTION: This option is designed to prepare students to use information technology to realize a variety of system-based goals (e.g., reliability, accessibility, efficiency, etc.). It is focused on developing a theoretical foundation and the skill set needed for integrating information technology into different systems for the purpose of enhancing system performance. The emphasis is on providing the student with both the theoretical frameworks needed to use information technology as a system attribute as well as a set of application-oriented experiences and skills.

Entrance Requirements: To be eligible for entrance to the Information Sciences and Technology (ISTBS) major, students must:

1. have completed the following entrance-to-major requirements with a grade of C or better in each: IST 110(3); IST 140(3) (or equivalent CMPSC 101 GQ(3) or CMPSC 121 GQ(3)), IST 210(3), and IST 220(3).
2. have achieved a minimum cumulative grade point average of 2.00 prior to and through the end of the semester during which the entrance-to-major procedure is carried out.

The Integrated Undergraduate Graduate (IUG) program is available for strong undergraduate students who wish to pursue a bachelor's and master's degree in a shorter period of time than would be necessary if the degrees were pursued separately. Information Sciences and Technology undergraduates may apply for admission to the ISTBS/ISTMS IUG program as early as the end of their sophomore year but no later than the end of their junior year after completing a minimum of 60 credits, if they meet the following admission requirements:

1. Must be enrolled in the ISTBS undergraduate degree program.
2. Must have completed 60 credits of an ISTBS undergraduate degree program.
3. Must apply to the IUG program by the end of their junior year.
4. Must apply to and be accepted without reservation into the Graduate School and M.S. program in IST. Students must complete the [Graduate School application](#).
5. Must have an overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
6. Must present an approved plan of study. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
7. Must present two letters of recommendation from faculty members. (Note: For Schreyer Honors College students, these can be the same two letters required by the Schreyer Honors College.)
8. Must meet with both the Director of Undergraduate Academic Affairs and the Graduate Program Coordinator to declare interest and receive information about the IUG program.

For Schreyer Honors College students, students admitted to the IUG program may double-count a maximum of 12 credits toward their graduate and undergraduate degrees in Information Sciences and Technology. Thesis or scholarly paper credits may not double-count.

For the B.S. degree in Information Sciences and Technology, a minimum of 125 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of the *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 8 credits

REQUIREMENTS FOR THE MAJOR: 84 credits

(This includes 12 credits of General Education courses: 6 credits of GQ courses; 3 credits of GS courses; and 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 60 credits

PRESCRIBED COURSES (26 credits)

IST 110 GS(3) [\[1\]](#), IST 210(3) [\[1\]](#), IST 220(3) [\[1\]](#), IST 230(3) [\[1\]](#) (Sem: 1-4)

STAT 200 GQ(4) (Sem: 3-6)

IST 495(1) [\[1\]](#) (Sem: 3-8)

IST 301(3) [\[1\]](#), IST 331(3) [\[1\]](#) (Sem: 5-8)

IST 440(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (13 credits)

CMPSC 101 GQ(3) [\[1\]](#), CMPSC 121 GQ(3) [\[1\]](#), or IST 140(3) [\[1\]](#) (Sem: 1-4)

ECON 14 GS(3), ECON 102 GS(3), or ECON 104 GS(3) (Sem: 1-4)

ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 1-4)
 MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Attainment of third-level proficiency in a single foreign language (12 credits). Proficiency must be demonstrated by either examination or course work. See the admission section of the general information in this *Bulletin* for the placement policy for Penn State foreign language courses. (Sem: 1-4)

Select 6 credits of international courses in foreign culture from College-approved list (Sem: 5-8)

Select 3 credits [11](#) at the 400 level in emerging issues and technologies from College-approved list (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 24 credits

INFORMATION CONTEXT: PEOPLE, ORGANIZATIONS, AND SOCIETY OPTION: 24 credits

PRESCRIBED COURSES (6 credits) [11](#)

IST 431(3) and IST 432(3) (Sem: 5-8)

ADDITIONAL COURSES (6 credits) [11](#)

IST 240(3) or IST 242(3) (Sem: 1-4)

IST 302(3) or IST 413(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from College-approved list (at least 3 credits at the 400-level and no more than 6 credits below the 200-level.) (Sem: 5-8)

INFORMATION SYSTEMS: DESIGN & DEVELOPMENT OPTION: 24 credits

PRESCRIBED COURSES (6 credits) [11](#)

IST 242(3) (Sem: 1-4)

IST 311(3) (Sem: 5-8)

ADDITIONAL COURSES (9 credits) [11](#)

Select 3 credits from IST 261(3) or IST 361(3) (Sem: 5-8)

Select 6 credits from IST 411(3), IST 412(3), or IST 413(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from College-approved list (at least 3 credits must be at the 400-level.) (Sem: 5-8)

INFORMATION TECHNOLOGY: INTEGRATION & APPLICATION OPTION: 24 credits

PRESCRIBED COURSES (9 credits) [11](#)

IST 302(3), IST 420(3), IST 421(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits) [11](#)

IST 240(3) or IST 242(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from College-approved list (at least 3 credits at the 400-level and no more than 6 credits below the 200-level.) (Sem: 5-8)

Integrated B.S. in Information Sciences and Technology / M.S. in Information Sciences and Technology

The College of Information Sciences and Technology offers an integrated B.S./M.S. (IUG) program designed to allow academically superior students in the Information Sciences and Technology major to obtain both the bachelor's in Information Sciences and Technology and M.S. degree in Information Sciences and Technology in a shorter period of time than would be necessary if the degrees were pursued separately. The first two to three years of undergraduate coursework follow the same undergraduate curriculum that other students follow in the Information Sciences & Technology major. Interested students may apply for admission to the IUG program as early as the end of their sophomore year but no later than the end of their junior year after completing a minimum of 60 credits. If admitted to the IUG, the final years of study include two graduate courses, Foundations of Theories and Methods of Information Sciences and Technology Research (IST 504) in the fall and Foundations of Research Design in Information Sciences and Technology (IST 505) in the spring, plus six credits of research methods courses, twelve credits of graduate specialty courses, and six credits of graduate thesis (IST 600) or scholarly paper (IST 594).

(Note: For Schreyer Honors College students, those who complete the graduate thesis for the Master's requirement may use the graduate thesis, itself, to fulfill the undergraduate honors thesis requirement, as well. Honors students who opt for the Master's scholarly paper must also complete an undergraduate honors thesis.)

The integrated B.S. in Information Sciences and Technology /M.S. in Information Sciences and Technology (IUG) degree meets the needs of the most academically talented students in the Information Sciences and Technology undergraduate major. A proportion of these successful students wish to pursue graduate studies sometime after graduation. Offering the IUG benefits these students by offering an accelerated path to a graduate degree. Additionally, the IUG program can provide these students with a more cohesive program of study with opportunities to engage in more comprehensive research leading to both the Bachelor's and Master's degree.

For the B.S. in Information Sciences & Technology/M.S. in Information Sciences & Technology IUG program, a minimum of 125 credits are required for the bachelor's degree and 30 credits for the M.S. degree. Students admitted to the IUG program may double-count a maximum of 12 credits to their graduate and undergraduate degrees. The required 6 credits of IST 504 and IST 505 will apply to both the graduate program and the undergraduate program. Students may choose an additional 6 credits to double-count for both the undergraduate and graduate degrees from the following: IST 411, IST 412, IST 413, IST 420, IST 421, IST 431, IST 432. Graduate thesis or scholarly paper credits may not double-count.

The objectives of the Integrated Undergraduate Graduate Program include:

1. To offer highly qualified students the opportunity to earn two degrees in less time than it would take to do two sequential degrees. In particular, IUG students may count up to 12 credits towards both their B.S. and M.S. degree requirements.
2. To permit coherent planning of studies through the graduate degree, with advising informed by not only the requirements of the baccalaureate program, but also the longer-range goals of the graduate degree.
3. To introduce undergraduate students to the rigors of both graduate study and graduate faculty.
4. To make the resources of the Graduate School available to IUG students.
5. To allow students with IUG status to benefit from their association with graduate students whose level of work and whose intensity of interest and commitment parallel their own.

Admission Requirements

To initiate the application process, students must submit an *Integrated Undergraduate-Graduate (IUG) Degree in Information Sciences and Technology Form*, a transcript, and two letters of recommendation (both from faculty members) to the IST Graduate Programs Office. The Director of Undergraduate Academic Affairs, in consultation with the Graduate Programs Coordinator, will help undergraduate candidates determine a proposed sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. Acceptance into the IST IUG program will be determined by the Graduate Recruitment Committee.

Information Sciences and Technology undergraduate majors may apply for admission no earlier than February 15th of their sophomore year and no later than the February 15th of their junior year after completing a minimum of 60 credits, if they meet the following admission requirements:

1. Must be enrolled in the ISTBS undergraduate degree program.
2. Must have completed 60 credits of an ISTBS undergraduate degree program.
3. Must apply to the IUG program by the end of their junior year.
4. Must apply to and be accepted without reservation into the Graduate School and M.S. program in IST. Students must complete the [Graduate School application](#).
5. Must have an overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
6. Must present an approved plan of study. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.

7. Must present two letters of recommendation from faculty members. (Note: For Schreyer Honors College students, these can be the same two letters required by the Schreyer Honors College.)
8. Must meet with both the Director of Undergraduate Academic Affairs and the Graduate Program Coordinator to declare interest and receive information about the IUG program.

For Schreyer Honors College students, students must also follow guidelines and procedures for applying for IUG in the Schreyer Honors College:

<http://www.shc.psu.edu/students/iug/program/>

In addition, applicants must apply to and be admitted to the Graduate School of the Pennsylvania State University at the time of their application to the IUG degree program. These admission standards are high, as it is thought the program will only be appropriate for students with high levels of academic skills. The program area does have discretion in admitting Information Sciences and Technology majors into the integrated program, and extenuating circumstances can always be considered in terms of possible admission. Individuals who are unable to be admitted into the integrated program of study can apply for regular admission to the graduate program when they complete their undergraduate program of study.

Sample Sequence of Graduate Coursework in Addition to Undergraduate Courses

Year	Fall	Spring	MS Credits
Year 1 (Senior Undergraduate Year)	IST 504: Foundations 3 Methods course (3)**	IST 505: Research Design (3) Methods course (3)**	30*
Year 2 (Super Senior Undergraduate Year)	IST 600 or IST 594 Thesis Research (3) Grad Speciality Course (3)** Grad Speciality Course (3)**	Methods course (3)** IST 600 or IST 594 Thesis Research (3) Grad Speciality Course (3)** Grad Speciality Course (3)**	

* Students admitted to the IUG program may double-count a maximum of 12 credits toward their graduate and undergraduate degrees in Information Sciences and Technology. In their senior year, IUG students will take 6 credits of specified graduate work, courses IST 504 and IST 505, and 6 credits of methods courses. These 6 credits of IST 504 and IST 505 will apply to both the graduate program and the undergraduate IST/B.S. support of option requirement. In their super senior year, students may choose an additional 6 credits to double-count for both the undergraduate and graduate degrees. These courses must be at the 400-level or above. Students may choose any 400-level undergraduate option course (IST 411, IST 412, IST 413, IST 420, IST 421, IST 431, IST 432) that they are using to fulfill an undergraduate option requirement and apply the credits to both the undergraduate option requirement and the graduate specialty course requirement. Credits associated with the thesis or culminating scholarly paper, i.e., IST 600 and IST 594, may not be double-counted. However, for Schreyer Honors College students, the Master's thesis deliverable, itself, may double-count for the undergraduate thesis deliverable requirement.

** Choose graduate level methods course after consultation in advance with the student's faculty adviser.

*** Choose any 400 or 500 level course that contributes to the student's chosen area of specialty with a maximum of six credits at the 400 level.

The total resulting credits will be a minimum of 155 credits, with 125 credits completed for the undergraduate IST degree. Twelve graduate credits will be completed in the senior year, and the remaining 18 graduate credits will be completed in the super senior year.

If for any reason a student admitted to the B.S./M.S. program is unable to complete the requirement for the Master of Science degree program in Information Sciences and Technology, the student will be permitted to receive the Bachelor's degree assuming all degree requirements have been satisfactorily completed.

Student performance will be monitored on an on-going basis by the student's adviser and Graduate Programs. Students admitted to the integrated program must maintain a minimum cumulative GPA of a 3.3 overall and a minimum 3.0 GPA in all courses used toward the M.S. degree in order to maintain good academic standing and meet graduation requirements. (See information on Grade-Point Average in the Graduate Bulletin <http://bulletins.psu.edu/graduate/degree/requirements/masters/>) For Schreyer Honors College students in the IUG program, students must maintain a minimum cumulative GPA of 3.4 overall and a minimum 3.0 GPA in all courses used toward the M.S. degree in order to maintain good academic standing and meet graduation requirements. Successful completion of a Schreyer Scholar's Master's thesis will be accepted as completion of the honors thesis requirement.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] Students in the Information Systems: Design and Development Option are expected to take IST 242 prior to taking the prescribed and additional courses for that option.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-087

Review Date: 8/22/2017

S

PROGRAM CURRENTLY ON HOLD
NOT ACCEPTING NEW STUDENTS
Begin Date of Enrollment Hold: DECEMBER 6, 2016

Information Sciences and Technology

University Park, College of Information Sciences and Technology (ISTBA)

Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies, College of IST

The Bachelor of Arts in Information Sciences and Technology will provide students who are inherently independent and creative with new avenues of study. This degree will be one which will provide them with a thorough grounding in information sciences and technology but also the flexibility to design a curriculum of study to fit their interests and aspirations. Whether these students wish to blend information science and technology with the arts, the humanities, or with the sciences, this degree will provide them with the breadth of experience that they need to accomplish their goals. The core of the B.A. program in IST will parallel that of the B.S. degree, thus the B.A. student will be equipped with the same core expertise and tools sets that they need to be able to navigate through the increasingly complex technology landscape. However, the flexibility of the curriculum will give them the opportunity to learn how to apply IT creatively. The B.A. in IST will be highly interdisciplinary, as is fitting for an expressly interdisciplinary college. The degree will be suitable for students who wish to be entrepreneurs, who seek to go on to law or medical school, or who want to acquire an advanced degree in graduate studies.

Entrance Requirements: To be eligible for entrance to the Information Sciences and Technology (ISTBA) major, students must:

1. have achieved at least third semester classification while pursuing a program of study that includes at least two of the following four courses with a grade of C or better in each: IST 110, IST 130, IST 210, IST 220.
2. have met with a member of the IST Advising staff, with the outcome being a workable academic plan selected either from a set of example templates (e.g., pre-law) or developed in consultation with the adviser. This meeting must take place prior to the completion of 60 credits. At campuses other than University Park, students will meet with a local IST adviser to develop their academic plans.

For the B.A. degree in Information Sciences and Technology, a minimum of 125 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
 (See description of General Education in front of the *Bulletin*.)

FIRST-YEAR SEMINAR:
 (Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
 (Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
 (Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 16 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
 (3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
 (See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 40 credits

PRESCRIBED COURSES (16 credits)
 IST 110 GS(3) [\[1\]](#), IST 130 GA(3) [\[1\]](#), IST 210(3) [\[1\]](#), IST 220(3) [\[1\]](#) (Sem: 1-4)
 IST 495(1) [\[1\]](#) (Sem: 3-8)
 IST 440(3) [\[1\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (24 credits) [\[1\]](#)
 Select 24 credits of IST and IST-related courses in consultation with academic adviser. (At least 12 credits must be at the 400 level.)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-03-086

Review Date: 11/18/2014

IS

Italian

University Park, College of the Liberal Arts (IT BA)

PROFESSOR PAOLA (GIULI) DUSSIAS, Head

The major offers training in the skills required for fluency in Italian and knowledge in Italian culture, civilization, and literature. Its aim is to open to the student both the traditions of one of the major formative components of the Western world and the continuing vitality of modern Italian and Italian-American life.

As one of the humanistic programs of the College of the Liberal Arts, the Italian major is not designed to be directly vocational. Nevertheless, rigorous training in either of the two Italian major options can prepare students for rewarding and unique careers in business, travel, ministry, banking, and education. In addition, the federal government employs liberal arts graduates with foreign-language skills in organizations including the National Security Agency, the Central Intelligence Agency, the U.S. Information Agency, and the Department of Labor. The Italian major is also preparatory for graduate work directed to the Ph.D. degree required for teaching and research in colleges and universities. Students with degrees in the humanities are particularly successful applicants to professional schools, such as law and medicine.

TO VIEW THE [Italian Minor \(IT\)](#).

For the B.A. degree in Italian, a minimum of 122 credits is required for the Italian Language and Literature option, or 123 credits minimum is required for the Italian Studies option.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 35 credits [\[1\]](#)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 9 credits

PRESCRIBED COURSES (3 credits)

IT 301(3) (Sem: 1-4)

ADDITIONAL COURSES (6 credits)

IT 130 GH;IL(3) or IT 131 GH;US(3) (Sem: 1-4)

IT 415(3) or IT 490(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 26-27 credits

LANGUAGE AND LITERATURE OPTION: (26 credits)

ADDITIONAL COURSES (26 credits)

Select 18 credits of which at least 9 credits are courses taught in Italian, and at least 9 credits are at the 400-level (some courses will satisfy both conditions).

For courses taught in Italian, select from:

IT 320(3), IT 325(3), IT 330W(3), IT 412(3), IT 422(3) (Sem: 5-8)

or other courses taught in Italian in consultation with major advisor

For courses at the 400-level, select from:

IT 412(3), IT 422(3), IT 475(3), IT 480(3), IT 485(3), IT 497(1-9) (Sem: 5-8)

or other 400-level courses taught in Italian in consultation with major advisor

Select 8 credits from one of the following a, b, c, d, or e:

a) LATIN 001(4) and LATIN 002(4) (Sem: 1-4)

b) FR 001(4) and FR 002(4) (Sem: 1-4)

c) SPAN 001(4) and SPAN 002(4) (Sem: 1-4)

d) PORT 001(4) and PORT 002(4) (Sem: 1-4)

e) Foreign Study: IT 001(4), IT 002(4), IT 099(1-12), IT 399(1-12) (Sem: 1-8)

or other courses abroad in consultation with major advisor

ITALIAN STUDIES OPTION: (27 credits)

ADDITIONAL COURSES (27 credits)

Select 27 credits from categories a, b, and c:

NOTE: Courses in different categories in the Italian Studies option cannot double-count. Example: if a student uses IT 422 to satisfy category A requirements, IT 422 cannot count in category B. Also, in addition to the prescribed IT 415/490 course, Italian Studies majors must take a minimum of 12 credits at the 400-level in categories A, B, and C.

a) Select 6 credits from:

IT 320(3), IT 325(3), IT 330W(3), IT 412(3), IT 422(3) (Sem: 5-8)

or other 300 or 400-level courses taught in Italian in consultation with major advisor

b) Select 12 credits from:

IT 110(3), IT 230(3) (Sem: 1-4)

IT 320(3), IT 325(3), IT 330W(3), IT 399(1-12), IT 422(3), IT 475(3), IT 480(3), IT 485(3), IT 497(1-9) (Sem: 5-8)

or other courses in consultation with major advisor

c) Select 9 credits of 400-level courses in related disciplines from:

ARTH 411(3-9), ARTH 423(3-9), ARTH 456 IL(3), ARTH 458 IL(3), CAMS 410(3), CAS 471 US;IL(3), CMLIT 400(3), CMLIT 401(3), LATIN 402(3-12), LATIN 403(3-12), LATIN 404(3-12), LATIN 450(3), LING 447(3), LING 448(3), PHIL 437 IL(3), PHIL 455(3-6), PLSC 431(3), PLSC 432(3) (Sem: 5-8)

or other courses in consultation with major advisor

NOTE: While some of the courses in related disciplines focus specifically on Italian or Roman topics, other courses on this list endeavor to provide a broader cultural or disciplinary context for students with an Italian Studies orientation. Students will be encouraged to suggest to their major advisor other relevant 400-level special topics courses in other disciplines to satisfy this requirement.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2005

Blue Sheet Item #: 33-03-288

Review Date: 11/23/04

UCA Revision #2: 7/27/07

LA

Italian

University Park, College of the Liberal Arts (ITBS)

PROFESSOR CHIP GERFEN, Head

The major encourages students to prepare for careers in which fluency in Italian can be combined with training in other academic disciplines.

TO VIEW THE [Italian Minor \(IT\)](#)

For the B.S. degree in Italian, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

REQUIREMENTS FOR THE MAJOR: 60-72 credits^[1]
(This includes 0-12 credits of General Education Courses: 0-9 credits of GS courses, 0-3 credits of GWS courses.)

PRESCRIBED COURSES (15 credits)

IT 110(3), IT 301(3), (Sem: 1-4)

IT 320(3) (Sem: 3-8)

IT 412(3), IT 485(3) (Sem: 5-8)

ADDITIONAL COURSES (48 credits)

Select 15 credits (at least 6 of which must be at the 400-level) from:

IT 130 GH;IL(3), IT 131 GH;US(3), IT 230 GH(3) (Sem: 1-4)

IT 325(3), IT 330W(3) (Sem: 3-8)

IT 415(3), IT 422(3), IT 475(3), IT 480(3), IT 490(3), IT 497(1-9) (Sem: 5-8)

or other course in consultation with major advisor

Select 33 credits from:

CAS 200 US;IL(3), CAS 203(3), ECON 102 GS(3), ECON 104 GS(3); ENGL 202C GWS(3) or ENGL 202D GWS(3); HDFS 287W GS;US(3), LING 100 GS(3); PLSC 14 GS;IL(3) or PLSC 20 GS;IL(3); PSYCH 100 GS(3), STS 100 GH(3) (Sem: 1-4)

ECON 333 GS(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from one of the following two areas:

(1) Students must complete 9 credits as participants in a Penn State or Penn State-approved education abroad program of a minimum of six weeks in length. At least 3 of these 9 credits must be taught in Italian language.

Such as:

IT 1(4), IT 2(4), IT 99 IL(1-12) (Sem: 1-4)

IT 399 IL(1-12) (Sem: 1-8)

IT 496(1-18) (Sem: 5-8)

or other courses abroad in consultation with an advisor for the major.

(2) Select 9 credits of 400-level courses in related disciplines from the following or another 400-level course in consultation with an advisor for the major: AMST 448(3), ARTH 411(3-9), ARTH 423(3-9), ARTH 456 IL(3), ARTH 458 IL(3), CAMS 410(3), CAS 471 US;IL(3), ENGL 416(3), ENGL 417(3), ENGL 418(3), ENGL 419(3), LATIN 450(3), LING 447(3), LING 448(3), PHIL 455(3-6), PLSC 431(3), PLSC 432(3), PSYCH 457(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2005

Blue Sheet Item #: 33-03-289

Review Date: 11/23/04

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

LA

Jewish Studies

University Park, College of the Liberal Arts (J ST)

The Jewish Studies major provides broad inquiry into

the history, culture, society, literature, philosophy, politics, language, and religious beliefs of the Jewish people from Biblical times to the present. By nature interdisciplinary, and emphasizing critical thinking and global engagement, the Jewish Studies major is flexible and adaptable to a wide variety of courses of study. Students in the major must complete a total of thirty (30) credits, at least fifteen (15) of which must be at the 400-level. No more than eight (8) credits of Hebrew may count toward the 30-credit total. All students in the major must complete Jewish Studies 010, an introduction to Jewish Civilization, and select from approved lists or in consultation with the Director three courses that address Jewish studies across its history: one course in Jewish Studies of the Ancient through the Medieval periods, one course in Jewish Studies of the Early Modern through the Contemporary periods, and one course in Jewish Studies of the Diaspora. All students in the major are particularly encouraged to participate in a relevant internship/education abroad programs, and/or archaeological fieldwork for which course credits and scholarships are available. Penn State students also may enroll to study abroad at a university in Israel, and up to 15 credits of related education abroad courses in any country may be applied to requirements for the major in consultation with the adviser.

For the B.A. degree in Jewish Studies, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 21 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 30 credits [\[1\]](#)

(15 of these must be at the 400-level. No more than 15 credits in courses numbered 99, 199, 299, 399, or 499 may count toward the requirements for the major.)

PRESCRIBED COURSES (3 credits)

JST/HEBR 10 GH;IL(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (27 credits)

Select 3 credits in Jewish Studies in the Ancient Period through Medieval Period from approved program list or in consultation with the director (Sem: 1-8)

Select 3 credits in Jewish Studies from the Early Modern Period through the Contemporary period from approved program list or in consultation with the director (Sem: 1-8)

Select 3 credits in Jewish Studies concerned with Jewish culture in Diaspora from approved program list or in consultation with the director (Sem: 1-8)

(No more than 8 credits of Hebrew Language courses may count toward the requirements for the major)

Select 18 credits from Jewish Studies, Hebrew, or appropriate courses in Anthropology, Classics and Ancient Mediterranean Studies, Comparative Literature, English, History, Philosophy, or Religious Studies from approved program list (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-030

Review Date: 10/7/2014

LA

Japanese

University Park, College of the Liberal Arts (JAPNS)

PROFESSOR ON-CHO NG, *Department Head, Asian Studies*

The major in Japanese strengthens students' overall skills in internationalism and provides a focus on one of the world's most important nations. The Japanese major is designed for students who want to develop proficiency in speaking, listening, reading, and writing Japanese, and acquire profound knowledge of Japanese culture, history, and civilization in the context of East Asia.

The Japanese major encourages students to study abroad in order to deepen their understanding of the language, culture and contemporary society, and to develop intercultural and comparative perspectives.

The major can also help students prepare for graduate study in Japan-related fields and professional careers where proficiency in Japanese is required, such as government services, or multinational companies.

Students planning to teach in public schools should schedule the appropriate courses leading to certification in consultation with an adviser in the College of Education.

For the B.A. degree in Japanese, a minimum of 124 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVE or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

ELECTIVES: 23-29 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 35 credits^[1]

(This includes 0-6 credits of General Education GA, GH, or GS courses.)

(At least 21 credits must be at the 400 level.)

(Students are strongly encouraged to take at least 12 of their credits in Japan, either in a Penn State Education Abroad program or another program subject to departmental approval. For curricular sequencing, the program encourages students to pursue this Education Abroad experience in the fall semester of the junior year, unless the host institution runs on the Japanese academic schedule, in which case study abroad should be in the spring semester, or for the entire year.

PRESCRIBED COURSES (20 credits)

JAPNS 110 IL(4) (Sem: 3-4)

JAPNS 401 IL(4), JAPNS 402 IL(4) (Sem: 5-6)

JAPNS 403Y IL(4), JAPNS 404 IL(4) (Sem: 7-8)

ADDITIONAL COURSES (9 credits)

Select 3 credits from JAPNS 120 GH;IL(3) or JAPNS 121 GH;IL(3) (Sem:1-6)

Select 3 credits from the JAPNS 430-439 level (Sem: 1-8)

Select 3 credits from the JAPNS 450-459 level (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits pertaining to Japan, such as courses in art history, comparative history, geography, history, Japanese, philosophy, political science, religious studies, theatre arts, or other fields, selected from departmental list (Sem: 1-8)

Integrated Undergraduate-Graduate (IUG) Degree Program B.A. in Japanese and Master of International Affairs (M.I.A.)

The integrated undergraduate-graduate (IUG) degree program (B.A. in Asian Studies, Chinese, or Japanese/M.I.A. in International Affairs) provides an opportunity for strong students in these majors to complete a master's degree with 5 total years of study.

An increasingly globalized economy is likely to escalate the demand for graduate training in international affairs. The career choices for graduates with this training will also expand sharply.

The integrated degree program prepares students for a variety of careers requiring an interdisciplinary background in Asian Studies or Asian languages and international affairs. Examples of types of entities hiring in these areas are federal, state, and local governments, international organizations, multinational corporations, international banking and financial institutions, media organizations and journalism, consulting firms, policy research centers, and development assistance programs and foundations. The School of International Affairs (SIA) Master of International Affairs (M.I.A.) represents a professional degree designed to prepare students to thrive in these increasingly global career paths.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the *Graduate Bulletin*.

The number of openings in the integrated B.A./M.I.A. program is limited. Admission will be selective based on specific criteria set by the School of International Affairs. Students shall be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study. Students must be admitted to the program prior to taking the first course they intend to count towards the graduate degree. Specific requirements:

1. Must be enrolled in the Asian Studies, Chinese, or Japanese B.A. program.
2. Must apply to and be accepted into The Graduate School and the M.I.A. program in the School of International Affairs. Students must complete the [Graduate School application](#). All applicants will submit GRE scores, two letters of recommendation, and a personal statement addressing their reasons for pursuing a graduate degree in international affairs and discussing their plans and goals.
3. Although the program has no fixed minimum grade point average, an applicant is generally expected to have a minimum overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
4. Must include a plan of study identifying undergraduate credits to be applied to the M.I.A. degree elective requirements. The plan should cover the

entire time period of the integrated program, and it should be reviewed periodically with an adviser.
5. Must provide written endorsement from the head of Asian Studies.

M.I.A. Requirements for the Integrated B.A./M.I.A.

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the *Graduate Bulletin*.

M.I.A. portion of the integrated B.A./M.I.A. will require the completion of a minimum of 42 graduate credits, at least 18 of which are from six core courses consisting of INTAF 801(3), 802(3), 803(3), 804(3), 506(3) and INTAF 590(3). The remaining credits are attained through completion of the approved elective courses. A minimum of 6 credits must be at the 500-level.

In addition to the core curriculum and elective courses, M.I.A. degree candidates must complete either: (i) a master's paper; or (ii) a supervised internship placement. If the first option is chosen and the candidate opts to complete a paper, he/she must complete 3 credits of INTAF 594. The master's paper will involve integrating and showing mastery of the subject matter of the student's curricular emphasis, and may also involve original research. If the second option is chosen, the candidate will complete 3 credits of INTAF 595. The student will participate in a supervised internship of sufficient depth and professionalism that will allow the student to experience the integration of his/her curricular studies in an actual professional environment. A reflective paper will be submitted as a part of this credit requirement.

In order to graduate, M.I.A. degree students also will need to demonstrate proficiency in a language other than English. Proficiency will be defined as follows: (i) four semesters of a Penn State language sequence or its equivalent (15 credits with a quality grade of B or better using a 4.0 scale); (ii) native acquisition, as shown by the candidate's personal history and approved by the SIA faculty; or (iii) performance on a proficiency evaluation sufficient to equal four semesters of language learning; for this purpose, either Penn State's proficiency certification process or another pre-approved proficiency assessment may be used. Language study does not provide credits towards the M.I.A. degree.

If students accepted into the IUG program are unable to complete the M.I.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

M.I.A. Degree	Integrated B.A./M.I.A. Degree
Core Courses (18)	Core Courses (18)
INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3)	INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3)
Electives (21)	Electives (21)
Course choices are from a pre-approved list in the SIA, or by SIA faculty-approved substitution.	A maximum of 12 credits may be double counted toward the B.A. and the M.I.A. Courses that may be double-counted include: ASIA 463, ASIA 465, ASIA 469, ASIA 475, ASIA 401, ASIA 481, ASIA 486, ASIA 400, ASIA 430, ASIA 501, ASIA 502, and ASIA 577.
Capstone (3)	Capstone (3)
Master's Paper (INTAF 594) or Internship (INTAF 595)	Master's Paper (INTAF 594) or Internship (INTAF 595)

Courses that may be double-counted include: ASIA 463, ASIA 465, ASIA 469, ASIA 475, ASIA 401, ASIA 481, ASIA 486, ASIA 400, ASIA 430, ASIA 501, ASIA 502, and ASIA 577. No more than 6 of the double-counted credits may be at the 400-level. The graduate thesis or other graduate culminating/capstone experience (including any associated credits and/or deliverables) may not be double counted towards any other degree.

Tuition Charges, Grant-in-Aid, and Assistantships

Students admitted to the School of International Affairs through the IUG with a B.A. in Asian Studies, Chinese, or Japanese may be considered to receive financial assistance. Students on graduate assistantships must adhere to the [course load limits set forth in the Graduate Bulletin](#).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-106

Review Date: 8/22/2017

LA

Journalism

University Park, Donald P. Bellisario College of Communications (JOURN)

PROFESSOR Russell Eshleman Head, Department of Journalism

The goal of the major is to provide students with the critical thinking, ethical, legal and professional skills that will enable them to enter positions in all areas of journalism.

Students must select at least 72 credits in non-COMM courses.

The following three options are offered:

BROADCAST JOURNALISM OPTION: This option is designed for students interested in radio, television, and/or multimedia journalism as a reporter, editor, or producer. Students are trained in the techniques of audio/video and online reporting and editing. They take two required courses that provide instruction in the basic skills of reporting and editing and choose two other courses that provide advanced instruction in these areas.

DIGITAL AND PRINT JOURNALISM OPTION: This option is designed for students interested in newspaper, magazine and/or multimedia journalism as a reporter, editor, or producer. Students are trained in the techniques of print and online reporting and editing. They take two required courses that provide instruction in the basic skills of reporting and editing and choose two other courses that provide advanced instruction in these areas.

PHOTOJOURNALISM OPTION: This option is designed for students interested in photo and/or multimedia journalism as a photographer, editor or producer. Students are trained in the techniques of still/video photography and editing. They take two required courses that provide instruction in the basic skills of photography and editing and choose two other courses that provide advanced instruction in these areas.

For the B.A. degree in Journalism, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 2 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 49 credits^[1]

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 31 credits

PRESCRIBED COURSES (13 credits)
COMM 160(1) (Sem: 1-2)
COMM 260W(3) (Sem: 3-4)
COMM 271(3) (Sem: 3-6)
COMM 403(3), COMM 409(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)
Select 18 credits for completion of a University-approved minor (Sem: 1-8)
[Students majoring in journalism must take a University-approved minor outside the Bellisario College of Communications. The minimum requirement for a minor is 18 credits. By careful planning, a student may use General Education and Bachelor of Arts courses to help fulfill this requirement. In lieu of a minor, students may take a concurrent major or concurrent degree, as long as it is outside the Bellisario College of Communications. Students should consult with their adviser as soon as possible about this requirement.] (Sem: 1-8)

REQUIREMENTS FOR THE OPTION: 18 credits

Options can be combined but only with the consent of a student's adviser.

BROADCAST JOURNALISM OPTION (18 credits)

PRESCRIBED COURSES (6 credits)
COMM 360(3), COMM 465(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)
Select 6 credits from COMM 400(3), COMM 402(3), COMM 466(3), COMM 475(3), COMM 480(6), COMM 481(3), COMM 495(1-3)[17] (Sem: 5-8)
Select 6 credits from COMM 180 GS(3), COMM 205 US(3), COMM 404(3), COMM 401(3), COMM 405(3), COMM 407A(3), COMM 407B(3), COMM 407C(3), COMM 410 IL(3), COMM 411(3), COMM 412(3), COMM 419 US;IL(3), COMM 494H(1-6), COMM 496(1-18), COMM 499 IL(1-12) (Sem: 5-8)

DIGITAL AND PRINT JOURNALISM OPTION (18 credits)

PRESCRIBED COURSES (6 credits)
COMM 460(3), COMM 467(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)
Select 6 credits from COMM 402(3), COMM 403(3), COMM 404(3), COMM 461(3), COMM 462(3), COMM 463(3), COMM 464(3), COMM 474(3), COMM 475(3), COMM 481(3), COMM 495(1-3)[17] (Sem: 5-8)
Select 6 credits from COMM 180 GS(3), COMM 205 US(3), COMM 404(3), COMM 401(3), COMM 405(3), COMM 407A(3), COMM 407B(3), COMM 407C(3), COMM 410 IL(3), COMM 411(3), COMM 412(3), COMM 419 US;IL(3), COMM 494H(1-6), COMM 496(1-18), COMM 499 IL(1-12) (Sem: 5-8)

PHOTOJOURNALISM OPTION (18 credits)

PRESCRIBED COURSES (6 credits)
COMM 269(3), COMM 469(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)
Select 6 credits from COMM 402(3), COMM 463(3), COMM 467(3), COMM 468(3), COMM 475(3), COMM 481(3), COMM 495(1-3)[17] (Sem: 5-8)
Select 6 credits from COMM 180 GS(3), COMM 205 US(3), COMM 404(3), COMM 401(3), COMM 405(3), COMM 407A(3), COMM 407B(3), COMM 407C(3), COMM 410 IL(3), COMM 411(3), COMM 412(3), COMM 419 US;IL(3), COMM 494H(1-6), COMM 496(1-18), COMM 499 IL(1-12) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[17] Internship in news with newspaper, radio, or TV. See the director of the internship program for specifics.

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2017 - 2018

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-03-015

Review Date: 11/19/2013

CM

Kinesiology

Penn State Altoona
Berks College (KINBL)
Penn State Harrisburg (KINCA)
University Park, College of Health and Human Development (KINES)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR NANCY I. WILLIAMS, Head, Department of Kinesiology

Kinesiology offers a comprehensive program of study in the science of human movement and is designed for students who want to prepare for professions involving physical activity and for graduate study in related areas. The Kinesiology major options are: Applied Exercise and Health; Movement Science; and Exercise Science (offered only at Penn State Berks). All options require a culminating practicum or research experience. Relocation away from the University Park campus is generally necessary for the practicum. All options require a minimum of 120 credits for graduation. Additional requirements are mandated by the Pennsylvania Department of Education (PDE) for entrance to the Health and Physical Education (HPE) certification emphasis in the Applied Exercise and Health Option (AEH). Additional requirements are mandated by the Pennsylvania Department of Education (PDE) for entrance to the Health and Physical Education (HPE) certification emphasis in the Applied Exercise and Health Option (AEH). Information about the major and its options can be found at <http://www.hhdev.psu.edu/kines/index.html>

Students who have completed a minimum of 28 credits and have a 2.00 cumulative grade-point average are eligible for entrance into the major after completing an Entrance to Major form.

APPLIED EXERCISE AND HEALTH OPTION: This option provides applied interdisciplinary training in the foundations of the scientific understanding of exercise and health through the lifespan. Students identify one of two areas of emphasis that are certification-based and practice-oriented: (a) courses and practical experiences directed toward certification by organizations such as the American College of Sports Medicine (ACSM) or the National Strength and Conditioning Association (NSCA), or (b) a series of courses and student teaching leading to teacher certification. In order to qualify for the teacher certification track, students must meet the requirements mandated by the Pennsylvania Department of Education (PDE). PDE requirements can be found at <http://www.hhdev.psu.edu/kines/undergraduate/physical-health-education>. The completion of the Applied Exercise and Health Option will prepare students to work in the private or corporate fitness arenas, community-based fitness organizations, and university or hospital settings, or be Pennsylvania certified in health and physical education (K-12) and secure teaching positions in public or private schools.

MOVEMENT SCIENCE OPTION: This option provides interdisciplinary scientific training in academic areas such as biomechanics, exercise physiology, movement neuroscience, psychology of physical activity, and sport history and philosophy to understand movement for prevention and diagnosis of chronic disease, rehabilitation and treatment, and/or theoretical study. Students are prepared for graduate study in many clinical fields including medicine, physical therapy, occupational therapy, physical assistant, cardiac rehabilitation, as well as a broad range of careers in biomedical and health-related fields.

EXERCISE SCIENCE OPTION: (offered only at Penn State Berks and Penn State Harrisburg) This option is a program of study in the science of exercise. This program offers Kinesiology background and applied experience in fitness assessment, exercise physiology, exercise psychology, motor skill development, nutrition and healthy living skills. Graduates will be able to scientifically assess fitness levels of individuals. Analyzing those assessments, graduates will then be capable of designing and implementing appropriate exercise programs. Students in the Business Emphasis can obtain a Business Minor through this program. Students acquire basic business skills in accounting, marketing, management and entrepreneurial skills. Students choosing the Science Emphasis will select courses from a department list that will enhance their opportunity for graduate studies in Kinesiology-related fields, physical therapy and medical schools. The completion of the Exercise Science Option will enable graduates to compete for employment in the corporate fitness arena, private fitness clubs, community-based fitness organizations, hospital and university settings or possibly to operate their own health and fitness company.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. KINES requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(18-27 of these credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES :
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-2 credits

REQUIREMENTS FOR THE MAJOR: 95-109 credits
(This includes 18-27 credits of General Education courses: Applied Exercise and Health Option - 9 credits GN, 6 credits GQ, 3 credits GH, 6 credits of GS and 3 credits of GHA. Movement Science Option--9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 3 credits of GHA courses. Exercise Science Option--9 credits of GN courses; 6 credits of GQ courses; 3 credits of GHA courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 41-43 credits

PRESCRIBED COURSES (28 credits)[\[1\]](#)
BIOL 141 GN(3) (Sem: 1-4)
KINES 202(4), NUTR 251 GHA(3) (Sem: 3-4)
KINES 321(3), KINES 341 US:IL(3), KINES 345(3), KINES 350(3), KINES 360(3), KINES 384(3) (Sem: 3-6)

ADDITIONAL COURSES (13-15 credits)[\[1\]](#)
Select 3 credits: KINES 100(3); KINES 141 US:IL(3) (Sem 1-4)
Select 3 credits: KINES 180(3); KINES 101(3) (Sem 1-4)
Select 1 credit: KINES 295B(1); KINES 295(1) (Sem 1-4)
Select 3-4 credits: PHYS 150 GN(3); PHYS 250 GN(4) (Sem: 1-4)
Select 3-4 credits: STAT 200 GQ(4); or STAT 250 GQ(3); or SCM 200 GQ(4) (Sem: 2-6)

REQUIREMENTS FOR THE OPTION: 54-66 credits

APPLIED EXERCISE AND HEALTH OPTION: (62-66 credits)

PRESCRIBED COURSES (34 credits)
CHEM 101 GN(3) [\[1\]](#), CI 280 GH(3), EDPSY 010 GS(3) [\[1\]](#), KINES 200(3) [\[1\]](#), KINES 201(3) [\[1\]](#), KINES 267(1) [\[1\]](#), KINES 367(1) [\[1\]](#), KINE3S 368 (2) [\[1\]](#), KINES 401(3) [\[1\]](#), KINES 455(3) [\[1\]](#), KINES 456(4) [\[1\]](#), PSYCH 100 GS(3) [\[1\]](#) (Sem: 2-6)

ADDITIONAL COURSES (3 credits)
MATH 026 GQ(3) [\[1\]](#) or Satisfactory performance on the MATH placement examination--i.e., placement beyond the level of MATH 026 (Sem: 1-2_

SUPPORTING COURSES AND RELATED AREAS (25-29 credits)

Take the following required courses with selected emphasis area:

a. HPE Certification Emphasis (Sem: 7-8)
KINES 366(3), KINES 395A(1), KINES 400(3), KINES 464(3), KINES 468W(3), SPLED 400(4) (Sem: 7)

KINES 495A(12) (Sem: 8)

b. ACSM/NSCA Certification Emphasis (Sem: 7-8)

KINES 395(1), KINES 421(3), KINES 457(3), KINES 485(3), KINES 492(3)

Select 3 credits from approved 400-level KINES courses: KINES 410(3), KINES 411(3), KINES 422(3), KINES 424 US(3), KINES 425(3), KINES 460(3), KINES 465(3), KINES 467(3), KINES 481(3), KINES 483(3), KINES 493(3) (Sem: 7)

KINES 495B(6), KINES 495E(3) (Sem: 8)

MOVEMENT SCIENCE OPTION: (54-56 credits)

PRESCRIBED COURSES (24 credits) [\[1\]](#)

BIOL 110 GN(4), BIOL 142(1), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1) (Sem: 1-4)

PHYS 251 GN(4), PSYCH 100 GS(3) (Sem: 3-6)

KINES 395B(1) (Sem: 5-8)

KINES 495B(6) (Sem: 7-8)

ADDITIONAL COURSES (21-23 credits)

CHEM 106 GN(5) [\[1\]](#); or CHEM 110 GN(3) [\[1\]](#) (Sem: 1-4)

MATH 026 GQ(3) [\[1\]](#); or Satisfactory performance on the MATH placement examination--i.e., placement beyond the level of MATH 026 (Sem: 1-4)

Select an additional 15 credits from approved 400-level KINES courses:

KINES 410(3), KINES 411(3), KINES 420(3), KINES 421(3), KINES 422(3), KINES 423(3), KINES 424 US(3), KINES 425W(3), KINES 426(3), KINES 427(3), KINES 428(3), KINES 429(3), KINES 439(3), KINES 440(3), KINES 441 US(3), KINES 442 IL(3), KINES 443 IL(3), KINES 444 US(3), KINES 446 IL(3), KINES 447(3), KINES 452(3), KINES 453(3), KINES 454(3), KINES 455(3), KINES 456(4), KINES 457(3), KINES 460(3), KINES 463(3), KINES 465(3), KINES 467(3), KINES 481(3), KINES 483(3), KINES 484(3), KINES 485(3), KINES 488(3), KINES 492(3), KINES 493(3), KINES 495E(3), KINES 499 IL(1-12) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits in University-wide offerings from an approved list, in consultation with advisor. (Sem: 1-8)

EXERCISE SCIENCE OPTION: (54-56 credits)

PRESCRIBED COURSES (29 credits) [\[1\]](#)

KINES 200(3), KINES 201(3), KINES 260(3), (Sem: 3-4)

KINES 356(3), KINES 358(I) (Sem: 5-6)

KINES 420(3), KINES 456(4), KINES 457(3), KINES 495C(6) (Sem: 7-8)

ADDITIONAL COURSES (9-11 credits)

CHEM 101 GN(3) [\[1\]](#); or CHEM 106 GN(5) [\[1\]](#); or CHEM 110 GN(3) [\[1\]](#) and CHEM 111 GN(1) [\[1\]](#) (Sem: 1-2)

MATH 022 GQ(3) [\[1\]](#); or Satisfactory performance on the MATH placement examination--i.e., placement beyond the level of MATH 022 (Sem: 1-2)

Select 3 credits from KINES 001 GHA(1.5) to KINES 099(3) (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (16 credits)

Select 16 credits from one of the following emphasis area from an approved list, in consultation with advisor. At least 3 credits must be at the 400 level.

a. Business Emphasis (Sem: 1-8)

b. Science Emphasis (Sem: 1-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lastest Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-03-043

Review Date: 11/17/2015

UCA Revision #1: 8/8/06

HH

Liberal Arts and Earth and Mineral Sciences Concurrent Degree Program

Liberal Arts and Engineering Concurrent Degree Program

These programs require ten semesters of study, concurrently in the College of the Liberal Arts (during which the student completes 70 credits in General Education and Bachelor of Arts requirements and 33 to 37 basic engineering or science requirements), and in either the College of Earth and Mineral Sciences or the College of Engineering (during which the student completes the credits required in the selected major in Earth and Mineral Sciences or Engineering).

Upon completion of the program, the B.A. in General Arts and Sciences will be awarded by the College of the Liberal Arts and the B.S. by the College of Earth and Mineral Sciences or the College of Engineering. The majors available in the College of Earth and Mineral Sciences are Environmental Systems Engineering, Geosciences, Mining Engineering, Polymer Science, Mineral Economics, Petroleum and Natural Gas Engineering, Ceramic Science and Engineering, Metals Science and Engineering, or Meteorology. The majors available in the College of Engineering are Aerospace, Agricultural, Chemical, Civil, Electrical, Environmental, Industrial and Management Systems, Mechanical, or Nuclear Engineering, or Engineering Science^[44].

To be eligible for this program, a student must file an application for entrance with the associate dean for undergraduate studies, College of the Liberal Arts, not later than the third semester. Entrance to the program requires that the student satisfy all regular requirements of the College of the Liberal Arts and the College of Earth and Mineral Sciences or the College of Engineering. In addition, special requirements may need to be satisfied when enrollment controls are imposed on programs in any of the colleges because of space limitations. Once a student has met all the requirements for entrance to this program, transfer from the College of the Liberal Arts to the College of Earth and Mineral Sciences or the College of Engineering, with enrollment in one of the majors listed, will be approved automatically at the end of the sixth semester if the student continues to make normal progress toward the concurrent degree and has maintained a cumulative average of 2.00 or higher. Students entering majors in the College of Engineering must complete the following courses with a grade of C or higher: CHEM 110 GN(3) and CHEM 111 GN(1), MATH 140 GQ(4), MATH 141 GQ(4), and PHYS 201 GN(4), and meet the required cumulative grade-point average for the requested engineering major.

Students are advised of the absolute necessity for scheduling classes in exact sequence during the first six semesters of Concurrent Degree study. It is imperative that students obtain, from the Liberal Arts Undergraduate Studies Office, 101 Sparks Building, a copy of the Concurrent Degree requirements worksheet that enumerates the specific course requirements for the two programs for semesters one through six.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description for General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 12 credits

EARTH AND MINERAL SCIENCES OR ENGINEERING COMPONENT: 89-91 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses and 9 credits of GN courses.)

SEMESTERS ONE THROUGH SIX (33-34 credits)^[45]

PRESCRIBED COURSES (27 credits)

CHEM 111 GN(1), CHEM 113 GN(1), MATH 220 GQ(2-3), MATH 230(4), MATH 250(3) (Sem: 1-4)

EDSGN 10(1), EG 11(1) (Sem: 3-4)

PHYS 201 GN(4), PHYS 202 GN(4) (Sem: 3-6)

EMCH 211(3), EMCH 212(3) (Sem: 5-8)

ADDITIONAL COURSES (6-7 credits)

PHYS 203 GN(3) or PHYS 204 GN(4) (Sem: 3-6)

B.S. requirements^[46](3) (Sem: 5-6)

SEMESTERS SEVEN THROUGH TEN (56-57 credits)

Credits required in the selected major in Earth and Mineral Sciences or Engineering (56-57) (Sem: 7-10)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits from each of the following areas: arts, humanities, science/mathematics, social and behavioral sciences. (Sem: 9-10)

^[44] Enrollment in the Engineering Science program is limited to those students attaining an average of B or higher during their first six semesters and to those specially chosen by the College of Engineering faculty on the basis of evidence that they will benefit from the advanced courses.

^[45] Concurrent Degree candidates should consult the individual program requirements in the College of Engineering and the College of Earth and Mineral Sciences to ascertain which combinations of CHEM, E G, E MCH, MATH, and PHYS are required.

^[46] Concurrent Degree candidates should select a course in this category appropriate for the requirements for their program in either Earth and Mineral Sciences or Engineering.

Last Revised by the Department: Summer Session 1991

Blue Sheet Item #: 16-10-030

Review Date: 5/22/08

UCA Revision #1: 8/8/06

Landscape Architecture

University Park, College of Arts and Architecture (LARCH)

PROFESSOR ELIZA PENNYPACKER, *Head, Department of Landscape Architecture*

Landscape architecture is the art of design, planning, or management of the land and of the natural and built elements upon it. As an academic discipline, it embodies creative, cultural, philosophical, and scientific knowledge bases. As a professional discipline, the practice of landscape architecture includes site design, urban design, master planning, community planning, regional planning, resource conservation, and stewardship.

The program currently is a ten-semester curriculum leading to a professionally accredited Bachelor of Landscape Architecture degree. One semester of the curriculum is spent in a required semester abroad. The program prepares graduates for entry into professional offices or pursuit of advanced study in related disciplines. The curriculum develops both the creative insight and the technical skills essential to practice and fulfills the education requirement needed in all states to be eligible to take the professional licensing examination.

For the Bachelor of Landscape Architecture degree, a minimum of 139 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 6 credits

REQUIREMENTS FOR THE MAJOR: 109 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GA courses; 3 credits of GH courses; 3 credits of GS courses.)

PRESCRIBED COURSES (91 credits)

LARCH 60 GA;US;IL(3)[1], LARCH 115(3)[1], LARCH 116(3)[1], LARCH 121(1)[1], LARCH 145(3)[1], LARCH 155(2)[1], LARCH 156(2)[1], SOILS 101 GN(3) (Sem: 1-2)

LARCH 215(4)[1], LARCH 216(4)[1], LARCH 235(3)[1], LARCH 236(3)[1], LARCH 245(3)[1], LARCH 246(1)[1], LARCH 255(2)[1], LARCH 256(2)[1], LARCH 276(3)[1] (Sem: 3-4)

LARCH 315(4)[1], LARCH 335(3)[1], LARCH 336(3)[1], LARCH 365(3)[1], LARCH 375(3)[1], LARCH 382(3)[1], LARCH 414(5 per semester, maximum of 15)[1] (Sem: 5-6)

LARCH 424(3)[1], LARCH 499A IL(1)[1], LARCH 499B IL(5)[1], LARCH 499D IL(3)[1] (Sem: 7-9)

ADDITIONAL COURSES (18 credits)

Select 6 credits from: AGEEO 121 GN(3); BIOL 127 GN(3); BISC 1 GN(3); BISC 2 GN(3); EGEE 102 GN(3); FOR 201 GN(3); GEOG 115 GN(3); GEOSC 303(3); HORT 150 GN(3); METEO 122 GN(3); SOILS 71 GN;IL(3); (Sem: 1-2)

Select 6 credits from: AA 121 GA(3); ARCH 100 GA(3); ARCH 210 GA(3); ART 20 GA(3); ART 30 GA(3); ARTH 120 GA;IL(3); ARTH 140 GA;IL(3); ARTH 201 GA;IL(3); ARTH 202 GA;US;IL(3); ARTH 308 GA;US(3); ARTH 315 GA;IL(3); ARTH 320 GA;IL(3); ARTH 330 GA;IL(3); ARTH 335 GA;IL(3); GD 100 GA(3) (Sem: 1-2)

Select 3 credits from: AFR 191 GH;IL(3); AFR 192 GH;IL(3); ASIA 100 GH;IL(3); FR 137 GH;IL(3); GEOG 122 GH;US(3); GER 100 GH;IL(3); GER 200 GH;IL(3); HIST 112 GH;US(3); PHIL 13 GH(3); PHIL 118 GH(3) (Sem: 6-9)

Select 3 credits from: AFR 110 GS;IL(3); ANTH 120 GS;IL(3); CAS 222 GS;US;IL(3); CED 155 GS(3); GEOG 130 GS(3); GEOG 320 GS;US;IL(3); PLSC 22 GS;IL(3); RPTM 120 GS;US;IL(3); RSOC 11 GS;US(3); SOC 119 GS;US(4) (Sem: 6-9)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017(LARCH); Fall Semester 2009 (Integrated B.L.A./M.L.A.)

Blue Sheet Item #: 45-04-014A(LARCH); 37-07-002 and 37-07-000 (Integrated B.L.A./M.L.A.)

Review Date: 1/10/2017

AA

Letters, Arts, and Sciences

Abington College (LASAB)

Altoona College (LASAL)

University College (LASCC): Penn State Brandywine, Penn State DuBois, Penn State Greater Allegheny, Penn State Hazleton, Penn State Mont Alto, Penn State Shenango, Penn State Worthington Scranton

University Park, College of the Liberal Arts (LAS)

World Campus

Letters, Arts, and Sciences is a multi-disciplinary, theme-oriented, and student-designed major leading to a bachelor of arts degree. The major consists of 36 credits, divided into two sections. The core (12 credits) consists of 3 credits each in the following: research methods/projects; communication skills; theory/application; and critical analysis. The additional courses (24 credits) consist of courses directed toward the student's theme, 15 credits of which must be at the 400 level.

In order to be eligible for entrance to the major, the student must submit a proposal. In consultation with an LAS adviser, the student formulates a proposal designing a program that investigates a theme from the viewpoint of at least three different subject areas. Students may not duplicate existing majors from any academic area. An important standard for entrance to the Letters, Arts, and Sciences major is the student's ability to design a program with academic integrity worthy of a bachelor of arts degree.

For the B.A. degree in Letters, Arts, and Sciences, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Early Admission Program for Professional Schools: If a student is accepted and enrolled as a degree candidate in a professional postgraduate degree program requiring three years or more to complete (such as medical school, dental school, law school, theological seminary, etc.) and if that student completes 94 undergraduate credits at Penn State including General Education, B.A. requirements, and the LAS 12-credit core requirements, that student may use up to 30 credits from the professional school to complete the B.A. in LAS.

It must be emphasized that only top students are accepted into professional school programs on such an early admission basis and that not every professional school has such a policy. Students must have enrolled in LAS prior to attending the professional school to request graduation in LAS.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits^[1]

ADDITIONAL COURSES (24 credits)

In consultation with adviser, select 24 credits from University-wide offerings to include:

- a) 12 credits at the 400 level representing at least three different subject areas;
- b) a 3 credit 400-level capstone course (to be selected in consultation with adviser);
- c) at least 9 credits (of the 24 total) from the humanities and social sciences. (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

In consultation with adviser, select 3 credits in research methods/projects from courses that involve research methodology or that focus on a research project; select 3 credits in communication skills from courses that focus on expression including those in verbal, symbolic, and written skills; select 3 credits in theory/application from courses that focus on theory, principle, central concepts, or fundamental issues; select 3 credits in critical analysis from courses that focus on evaluation, synthesis, and analysis. (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2008

Blue Sheet Item #: 36-04-042

Review Date: 1/15/08

Reviewed by Publications: 06/23/06

LA

Latin American Studies

University Park, College of the Liberal Arts (LATAM)

PROFESSOR MATTHEW RESTALL, *in charge*

This interdisciplinary major is designed for students who want a basic understanding of Latin America. The program is organized so that it may be combined with a second major or a minor subject.

For the B. A. degree in Latin American Studies, a minimum of 121 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

To view the [Latin American Studies Minor \(LATAM\)](#)

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(9-12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 21-24 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 40 credits^[1]

(This includes 9-12 credits of General Education courses; 6 credits of GH courses; 3-6 credits of GS courses.)

PRESCRIBED COURSES (22 credits)

PORT 1(4), SPAN 200(3) (Sem: 1-4)

ANTH 45 GS;US;IL(3), HIST 178 GH;IL(3), HIST 179 GH;IL(3), SPAN 131 GH;US;IL(3) (Sem: 3-6)

PLSC 456(3) (Sem: 5-8)

ADDITIONAL COURSES (18 credits)

Select 18 credits from the following:

AFAM/SPAN 132 IL(3), ANTH 8 GS;IL(3), ANTH 422(3), ANTH 440(3), CMLIT 405 US;IL(3), ECON 14 GS(3)^[2], ECON 102 GS(3), ECON 104 GS(3) (Sem: 3-8)

ECON 333 GS(3), ECON 433(3), HIST 467 US;IL(3), HIST 468 IL(3), PLSC 422(3), PLSC 442(3), SPAN 300(3), SPAN 305(3), SPAN 410(3), SPAN 412(3), SPAN

472(3), SPAN 476(3) (Sem: 5-8)

PORT 2(4), PORT 3(4), PORT 405(3), (Sem: 1-8)

^[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

^[2] Choose only one course from ECON 102, ECON 104, or ECON 014.

Last Revised by the Department: Summer Session 2004

Blue Sheet Item #: 32-01-079

Review Date: 9/2/03

Law and Society

University Park, College of the Liberal Arts (LAWSC): offered via World Campus

DIANA R. GRUENDLER, *Faculty-in-Charge*

The College of the Liberal Arts Law and Society program is an undergraduate major that provides a comprehensive liberal arts education across multiple disciplines. The program focuses on understanding how social, cultural, economic, and political forces treat the law within the context of historical and contemporary trends. Socio-legal theory will provide a framework for understanding the increasing importance of programs that accentuate the study of law, and legal institutions.

The Law and Society program has six prescribed classes. In addition, a student will complete five supporting courses that incorporate the student's degree goals and can be tailored to his or her special interests. Students will consider the relationship between law, legal processes, human behavior, and legal and social institutions. The conventions of reading, argument, logic, and program solving will be used to explore issues.

Law and Society provides excellent preparation for higher schooling, such as law school or graduate study in sociology, criminology, or criminal justice. The major enhances career options in law enforcement, regulatory agencies, social service agencies, non-profit agencies, non-government agencies (NGO), and organizations that determine public policy. Law and Society also provides valuable knowledge for the small business owner.

For the B.A. degree in Law and Society, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12-15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of *Bulletin*)

FIRST-YEAR SEMINAR:

(Included in the ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in the ELECTIVES or GENERAL EDUCATION course selections, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 30-36 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in front of *Bulletin*.)

REQUIREMENTS FOR THE MAJOR: 33-36 credits^[1]

(This includes 12-15 Credits of General Education courses; 6 credits of GH courses; 0-3 credits of GQ courses; 6 credits of GS courses)

PRESCRIBED COURSES (18 credits)

HIST 20 GH;US(3), HIST 21 GH;US(3), LA 100(3), PLSC 1 GS(3), PLSC 110 GS;US(3), PLSC 472(3) (Sem: 3-8)

ADDITIONAL COURSES (3-6 credits)

PHIL 10 GH(3) or PHIL 12 GQ(3); or PHIL 10 GH(3) and PHIL 12 GQ(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (12-15 credits)

Select 12 credits from CAS 404(3), CRIM/SOC 467(3), LA 495(3), LA 496(3), LER 401(3), LER 458Y(3), PLSC 471(3) (Sem: 3-8)

Select 0-3 credits from CAS 321(3), CRIM 100 GS(3), CRIM 113 US(3), LST 370(3), LA 295(3), LA 296(3), LER 201 GS(3), PHIL 105 GH(3) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-071

Review Date: 04/09/2013

UCA Revision #2: 7/27/07

LA

Labor and Employment Relations

University Park, College of the Liberal Arts
World Campus

PROFESSOR PAUL CLARK, *Head*

This major permits students to undertake a study of work and the employment relationship in the context of a liberal arts education. A broad foundation of theoretical and professional knowledge is provided through a multidisciplinary approach. The B.A. and B.S. degrees draw on the perspectives of disciplines such as industrial relations, economics, history, law, sociology, and psychology. This focus includes the nature and functions of the institutions involved in the employment relationship. The B.S. degree requires more course work in quantification than the B.A. degree.

Graduates of Labor and Employment Relations are equipped for employment in business, government, and labor organizations as labor relations specialists, personnel and human resource specialists, researchers, organizers, consultants, and professionals in mediation and arbitration. The degree is also appropriate preparation for graduate study and law school.

For the B.A. degree in Labor and Employment Relations, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 21 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 39 credits^[1]

(This includes 6 credits of GS General Education courses.)

PRESCRIBED COURSES (21 credits)

ECON 102 GS(3), ECON 315 GS(3), LER 100 GS(3), PSYCH 281 GS(3), (Sem: 1-8)

LER 312(3), LER/HIST 458Y(3), LER 460(3) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)

LER 201 GS(3) or LER 401(3) (Sem: 5-8)

LER/WMNST 136 US(3) or LER 400 IL(3) (Sem: 5-8)

LER 488(1.5) and LER 489(1.5) or 3 credits in consultation with your adviser (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits of LER courses, at least 6 at the 400 level (only 3 credits of LER 495 and 3 credits of LER 496 may be used to satisfy this requirement) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2014

Blue Sheet Item #: 43-01-069

Review Date: 08/19/2014

UCA Revision #1: 8/8/06

LA

Labor and Employment Relations

University Park, College of the Liberal Arts
World Campus

PROFESSOR PAUL CLARK, *Head*

This major permits students to undertake a study of work and the employment relationship in the context of a liberal arts education. A broad foundation of theoretical and professional knowledge is provided through a multidisciplinary approach. The B.A. and B.S. degrees draw on the perspectives of disciplines such as industrial relations, economics, history, law, sociology, and psychology. This focus includes the nature and functions of the institutions involved in the employment relationship. The B.S. degree requires more course work in quantification than the B.A. degree.

Graduates of Labor and Employment Relations are equipped for employment in business, government, and labor organizations as labor relations specialists, personnel and human resource specialists, researchers, organizers, consultants, and professionals in mediation and arbitration. The degree is also appropriate preparation for graduate study and law school.

For the B.S. degree in Labor and Employment Relations, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6-10 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 23-28 credits

REQUIREMENTS FOR THE MAJOR: 61-62 credits^[1]

(This includes 6-10 credits of General Education courses; 6 credits of GS courses; 0-4 credits of GQ courses.)

PRESCRIBED COURSES (21 credits)

(Some courses in this category have prerequisites that are not included in the major.)

ECON 102 GS(3), ECON 315 GS(3), LER 100 GS(3), PSYCH 281 GS(3) (Sem: 1-8)

LER 312(3), LER/HIST 458Y US(3), LER 460(3) (Sem: 3-8)

ADDITIONAL COURSES (13 credits)

(Some courses in this category have prerequisites that are not included in the major.)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-8)

LER 201 GS(3) or LER 401(3) (Sem: 5-8)

LER/WMNST 136 US(3) or LER 400 IL(3) (Sem: 5-8)

LER 488(1.5) and LER 489(1.5) or select 3 credits in consultation with your adviser (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS (27-28 credits)

(LER courses that are used in the Additional Courses category may not be double-counted to satisfy this requirement. Some courses in this category have prerequisites that are not included in the major.)

Select 12-13 credits in consultation with adviser from the department list, at least 6 at the 400-level,

ACCTG 211(3), AFAM 100 GS;US(3), AFAM 110 GH;US(3), BA 243(4), CAS 203(3), CAS 352(3), ECON 342(3), HIST 155 GH;US(3), HPA 460(3), HM 365 IL(3), HM 466 US(3), MGMT 100(3), MGMT 301(3), MGMT 321(3), MGMT 341(3), OLEAD 100 GS(3), OLEAD 409(3), SOC 103 US(3), SOC 110 GS;US(3), SOC 119 GS;US(4), or take any 400-level AFAM, CAS, ECON, HIST, LTNST, MGMT, PHIL, PSYCH, SPAN, SOC, WMNST course (Sem: 5-8)

Select 15 credits from appropriate LER courses, at least 9 credits the the 400-level (only 3 credits of LER 495 or LER 496 may be used to satisfy this requirement) (Sem: 5-8)

Integrated B.S. in Labor and Employment Relations and M.S. in Human Resources and Employment Relations (LRHRER)

PROFESSOR PAUL F. CLARK, *Head*

The integrated LER B.S. and HRER M.S. is a five-year program designed for academically talented baccalaureate students to obtain both the B.S. and the M.S. degrees in LER and HRER with five years of study. Students will develop expertise in the human resources and labor relations fields beyond the B.S. degree. The undergraduate curriculum educates students about (1) the roles of employers, employees, employee organizations and public policy makers play in the employment relationship, (2) the complex personal and organizational issues inherent in the employment relationship (3) and how to systematically analyze those complex issues and evaluate research relevant to those analyses. The graduate curriculum provides for more individualized, focused learning in a concentrated sub-area of the HRER field. The program culminates with an M.S. research paper. Upon completion of the integrated degree, students will enter the workforce with advanced knowledge and expertise gained from conducting and analyzing empirical work and participating in seminar-style classes.

Admission Requirements

Admission to the integrated B.S./M.S. program will be limited to undergraduates with strong academic records. Applicants to the integrated program:

1. must be enrolled in the LER B.S. program;
2. must complete the Penn State graduate degree application form and pay the application fee
3. must have completed 60 credits of the undergraduate degree program when they officially apply for the M.S. (it is strongly suggested that students apply to the program prior to completing 100 credits)
4. should have an overall GPA of 3.2 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in the major;
5. must obtain letters of recommendation from the chairs of the Department's undergraduate and graduate committees, and
6. must submit a writing sample, 2 transcripts, 1 letter of recommendation (in addition to those from the chairs of the Department's undergraduate and graduate committees), and a career statement.

No GRE or GMAT scores are required for admission to the program.

Degree Requirements

Bachelor of Science

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(10 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 23-28 credits**B.S. REQUIREMENTS:** 61-62 credits(This includes 10 credits of General Education courses; 6 credits of GS; 0-4 credits of GQ courses)
[12 credits may be double counted, 6 must be at the 500-level]**PRESCRIBED COURSES:** (21 credits)

(Some courses in this category have prerequisites that are not included in the major)

ECON 102 GS(3), ECON 315 GS(3), LER 100 GS(3), PSYCH 281 GS(3) (Sem: 1-8)

LER 312(3), LER 460(3), LER/HIST 458Y US(3) (Sem: 3-8)

ADDITIONAL COURSES: (13 credits)

(Some courses in this category have prerequisites that are not included in the major)

SCM 200(4) or STAT 200 GQ(4) (Sem: 3-8)

LER 201 GS(3) or LER 401(3) (Sem: 5-8)

LER/WMNST 136 US(3) or LER 400 IL(3) (Sem: 5-8)

LER 400 IL(3); or LER 488(1.5) and LER 489(1.5) (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS: (27-28 credits)

(LER courses that are used in the Additional Courses category may not be double counted to satisfy this requirement. Some courses in this category have prerequisites that are not included in the major.)

Select 12-13 credits in consultation with adviser from the department list, at least 6 at the 400 level,

ACCTG 211(3), AFAM 100 GS;US(3), AFAM 110 GH;US(3), BA 243(4), CAS 203(3), CAS 352(3), ECON 342(3), HIST 155 GH;US(3), HPA 460(3), HM 365 IL(3), HM 466 US(3), MGMT 100(3), MGMT 301(3), MGMT 321(3), MGMT 341(3), OLEAD 100 GS(3), OLEAD 409(3), SOC 103 US(3), SOC 110 GS;US(3), SOC 119 GS;US(4), or take any 400-level AFAM, CAS, ECON, HIST, LTNST, MGMT, PHIL, PSYCH, SPAN, SOC, WMNST course (Sem: 5-8)

Select 15 credits from appropriate LER courses, at least 9 credits the the 400-level (only 3 credits of LER 495 or LER 496 may be sued to satisfy this requirement) (Sem: 5-8)

M.S. REQUIREMENTS: 36 credits

[12 credits may be double counted, 6 must be at the 500 level]

PRESCRIBED COURSES: (21 credits)

HRER 501(3), HRER 502(3), HRER 504(3), HRER 505(3), HRER 512(3)*, HRER 513(3)**, HRER 516(3)

*or other statistics course approved in advance by graduate director

**or other methods course approved in advance by graduate director

ADDITIONAL COURSES: (15 credits)

Select 15 credits from the following list in consultation with adviser (only 6 credits may be at the 400 level).

LER 400 IL(3), LER 401(3), LER 424(3), LER 434(3), LER 435(3), LER 437(3), LER 444(3), LER 458Y US(3), LER 460(3), LER 465(3), LER 470(3), HRER 500(3), HRER 535(3), HRER 536(3), HRER 594(1-6), HRER 595(1-6), HRER 596(1-6), HRER 597(1-3), HRER 600(3-6)

Emphasis Courses (6 credits)

An emphasis is an area of study related to a particular aspect or domain of industrial relations and human resources. Select 6 credits from the M.S. prescribed or additional courses in consultation with the adviser.

Masters Research Paper or a Masters Thesis (6 credits)

Students must complete either a Masters Research Paper or a Masters Thesis. Students choosing the Thesis option must complete 6 thesis credits (HRER 600). These credits can be counted towards the 15 credits required from the M.S. Additional Courses section above.

Integrated B.S. in Labor and Employment Relations and M.P.S. in Human Resources and Employment Relations

The integrated LER B.S. and HRER M.P.S. is a five-year program designed for academically talented World Campus baccalaureate students to obtain both the B.S. and the M.P.S. degrees in LER and HRER in an intense, accelerated program of study. Students will develop expertise in the human resources and employment relations field beyond the B.S. degree. The undergraduate curriculum introduces students to (1) the roles employers, employees, employee organizations and public policy makers play in the employment relationship, (2) the complex personal and organizational issues inherent in the employment relationship, (3) the laws that form the legal framework for the employee-employer relationship, and (4) the tools needed to systematically analyze those complex issues and evaluate research relevant to those analyses. The graduate curriculum provides for a more intensive, individualized, and focused examination of the human resources and employment relations field. It also provides an opportunity for students to explore a concentrated sub-area of the HRER field in depth. The program culminates with a research project which is completed through the capstone course, HRER 894. Upon completion of the integrated degree, students will have gained advanced knowledge and expertise from conducting and analyzing empirical work and participating in online classes that can be directly applied to the workplace.

A minimum of 33 credits is needed to complete the MPS degree in HRER. Nine credits (400 level and above) can apply to both undergraduate and graduate degrees; six of these must be at a 500 or 800 level.

Admission Requirements

Admissions decisions for the B.S./M.P.S. program are based on the quality of the applicant's credentials. The decisions are made after a review of the complete application portfolio. The integrated B.S./M.P.S. program will be limited to highly talented undergraduates. Applicants to the integrated program:

- must be enrolled in the LER B.S. program;
- must complete the Penn State graduate degree application and pay the application fee;
- shall be admitted no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study;
- must have an overall GPA of 3.4 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.6 in the major;
- must submit 2 letters of recommendation from current or previous Penn State instructors and 1 additional letter of recommendation (should be professional or academic);
- must submit a writing sample, a resume, and a 2-3 page essay articulating career and educational goals that demonstrates the applicant's written communication skills;
- must present an approved plan of study (to be determined in consultation with the student's undergraduate adviser and the Graduate Director, and to be signed by both); and
- must possess the equivalent of two years of full-time work experience prior to admission.

No GRE or GMAT scores are required for admission to the program.

Degree Requirements

The M.P.S. requires 33 credits at the 400 level or higher; at least 6 credits must be at the 500 level.

Nine (9) of 33 credits can be double counted for B.S. and M.P.S. At least 6 of these must be at the 500 or 800 level.

Prescribed Courses (24 credits)**Human Resources and Employment Relations (HRER)**

- 501. Labor and Employment Law (3 credits)
- 504. Seminar in Industrial Relations (3 credits)
- 505. Seminar in Human Resources (3 credits)
- 800. International Context of HRER (3 credits)
- 802. Organizations in the Workplace (3 credits)
- 816. Labor Market Analysis (3 credits)
- 836. Diversity in the Workplace (3 credits)
- 894. Research Project (3 credits)

Areas of Concentration (6 credits)

Select 6 credits in area of concentration.

Benefits and Compensation

- LER 424. Employment Compensation (3 credits)
- LER 425. Employment Benefits (3 credits)

Employment and Labor Law

- LER 401. Law of Labor-Management Relations (3 credits)
- HRER 811. Labor and Employment Law II (3 credits)

Labor and Collective Bargaining

- LER 401. Law of Labor-Management Relations (3 credits)
- LER 435. Labor Relations in the Public Sector (3 credits)

Staffing, Training, and Development

- LER 426 Staffing and Training (3 credits) *or* WF ED 471 Training in Industry and Business (3 credits)
- WFED 573 Needs Assessment for Industrial Trainers (3 credits)

Elective Courses (3 credits)

Select an additional 3-credit course from the following list of LER, HRER, and WF ED courses.

Labor and Employee Relations (LER)

- 401. Law of Labor-Management Relations (3 credits)
- 424. Employment Compensation (3 credits)
- 425. Employment Benefits (3 credits)
- 426. Staffing and Training (3 credits)
- 435. Labor Relations in the Public Sector (3 credits)
- 444. Occupational Health: Policy and Practice (3 credits)
- 445Y. Politics of Affirmative Action (3 credits)
- 460. Human Resource Ethics (3 credits)
- 464. Communication Skills for Leaders in Groups and Organizations (3 credits)
- 465. Collective Decision Making (3 credits)
- 472. Work-Life Practices and Policies (3 credits)

Human Resources and Employee Relations (HRER)

- 811. Labor and Employment Law II (3 credits)

Workforce Education and Development (WFED)

- 471. Training in Industry and Business (3 credits)
- 573. Needs Assessment for Industrial Trainers (3 credits)

Student Aid

Fellowships, traineeships, graduate assistantships, and other forms of financial aid are described in the [STUDENT AID](#) section of the *Graduate Bulletin*.

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

[HUMAN RESOURCES AND EMPLOYMENT RELATIONS \(HRER\) course list](#)

[LABOR AND EMPLOYMENT RELATIONS \(LER\) course list](#)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lasted Revised by the Department: Summer Session 2014

Blue Sheet Item #: 43-01-070; IUG 41-05-127

Review Date: 08/19/2014

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

LA

Landscape Contracting

University Park, College of Agricultural Sciences (LSCPE)

PROFESSOR DAN T. STEARNS, Program Coordinator

Landscape contracting involves constructing, establishing, and maintaining landscapes from small residential projects to large commercial and industrial projects, as well as producing plans for small-scale residential and commercial sites. Students develop skills in construction, site design, plant material usage, plant establishment, and landscape maintenance. Students are also educated in areas such as graphics, surveying, soils, turfgrass management, weed and pest management, and in business operations.

Students are encouraged to obtain on-the-job experience in landscape contracting by working with a landscape maintenance or construction firm, or other related business. Credits for this experience are available for those who choose to enroll in an internship.

A wide variety of opportunities exist for landscape contracting graduates. They may be employed by design/build firms, landscape management firms, nurseries, or garden centers. Others may choose to work for municipalities, golf courses, parks, or botanical gardens.

DESIGN/BUILD OPTION: This option focuses on the development of skills in the planning and implementation of landscape projects. Employment opportunities exist with landscape contracting companies, irrigation companies, and retail centers.

MANAGEMENT OPTION: This option provides professional education in the management of landscapes. Employment opportunities include positions with landscape management companies and golf courses.

For the B.S. degree in Landscape Contracting, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 3-15 credits

REQUIREMENTS FOR THE MAJOR: 81-93 credits
(This includes 21-24 credits of General Education courses; 3 credits of GWS courses; 3-6 credits of GA courses; 3 credits of GQ courses; 9 credits of GN courses; 3 credits of GS courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 67-68 credits

PRESCRIBED COURSES (51 credits)
HORT 410(3), HORT 468(2) [\[1\]](#), LARCH 60 GA;US;IL(3), MATH 26 GQ(3) (Sem: 1-2)
PLANT 217(3), ACCTG 211(4), BA 250(3), BLAW 243(3), CHEM 101 GN(3), ENGL 202D GWS(3), HORT 101 GN(3) [\[1\]](#), HORT 120(2) [\[1\]](#), HORT 131(3) [\[1\]](#), HORT 137(3) [\[1\]](#), HORT 138(3) [\[1\]](#), HORT 408(4) [\[1\]](#) (Sem: 5-6)
SOILS 101 GN(3) (Sem: 7-8)

ADDITIONAL COURSES (16-17 credits)
AGBM 101 GS(3), ECON 14 GS(3), ECON 102 GS(3), or ECON 104 GS(3) (Sem: 3-4)
BIOL 110 GN(4) or BIOL 127 GN(3) (Sem: 3-4)
SPAN 1(4) or SPAN 2(4) or SPAN 105(4) (Sem: 3-4)
AGBM 220(3) or MKTG 220(3) (Sem: 5-6)
TURF 100(3) or TURF 235(3) (Sem: 5-6)

REQUIREMENTS FOR THE OPTION: 14-26 credits

DESIGN/BUILD OPTION: (25-26 credits)

PRESCRIBED COURSES (23 credits)
ART 20 GA(3), EDSGN 10(1), HORT 220(3) [\[1\]](#) (Sem: 3-4)
HORT 269(3) [\[1\]](#), HORT 464(4) [\[1\]](#) (Sem: 5-6)
HORT 368(4) [\[1\]](#), HORT 466(5) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (2-3 credits)
Select 2-3 credits from ENT 313(2), ENT 314(1), HORT 238(3), PPEM 300(3) or PPEM 318(2) (Sem: 5-6)

MANAGEMENT OPTION: (14-15 credits)

PRESCRIBED COURSES (9 credits)
ENT 313(2), ENT 314(1), HORT 238(3) [\[1\]](#), HORT 250(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (5-6 credits)
PPEM 300(3) or PPEM 318(2) (Sem: 7-8)
SOILS 402(3) or SOILS 404(3) (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

UCA Revision #1: 8/8/06

AG

Mechanical Engineering

University Park, College of Engineering (M E)

PROFESSOR KAREN A. THOLE, *Head, Department of Mechanical and Nuclear Engineering*

Mechanical Engineering is one of the broadest engineering disciplines and is central in many new technological developments. Mechanical engineers create things that help improve the health, happiness and safety of our everyday lives such as biomedical devices, aircraft propulsion, and ways to store renewable energies. Mechanical engineering is divided into two broad areas: mechanical systems and thermal systems. Mechanical systems include the design of mechanisms and the analysis of the strength and wear of materials. Thermal systems include methods of energy conversions, heat transfer and fluid flow.

Program Educational Objectives:

The overall educational objective of the Mechanical Engineering program is to help prepare our graduates to succeed and provide leadership in a range of career paths. To that end we endeavor to maintain and continuously improve a curriculum that prepares our graduates to:

1. Apply foundational knowledge, critical thinking, problem solving, and creativity in engineering practice or in other fields.
2. Grow as leaders while maintaining the highest societal responsibility and ethical standards in the global workplace.
3. Develop innovative solutions through effective communication, collaboration, and teamwork.
4. Seek advancement in their knowledge and careers through continuing technical and/or professional studies.

Program Outcomes (Student Outcomes):

The Program outcomes are knowledge, skills, and/or behavior that are derived from the program educational objectives.

- a. An ability to apply knowledge of mathematics, science, and engineering.
- b. An ability to design and conduct experiments, as well as to analyze and interpret data.
- c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- d. An ability to function on multidisciplinary teams.
- e. An ability to identify, formulate, and solve engineering problems.
- f. An understanding of professional and ethical responsibility.
- g. An ability to communicate effectively.
- h. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- i. A recognition of the need for, and an ability to engage in life-long learning.
- j. A knowledge of contemporary issues.
- k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Mechanical Engineering, a minimum of 131 credits is required. This baccalaureate program in Mechanical Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 113 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (83 credits)

CHEM 110 GN(3) [1], EDSCN 100(3), MATH 140 GQ(4) [1], MATH 141 GQ(4) [1], PHYS 211 GN(4) [1] (Sem: 1-2)
CMPSC 200 GQ(3), EMCH 211(3) [1], EMCH 212(3) [1], EMCH 213(3) [1], ME 300(3) [1], MATH 220 GQ(2-3), MATH 231(2), MATH 251(4) [1], PHYS 212 GN(4), PHYS 214 GN(2) (Sem: 3-4)
EE 212(3), EMCH 315(2), ENGL 202C GWS(3), ME 320(3) [1], ME 340(3) [1], ME 345(4) [1], ME 360(3) [1], ME 370(3) [1], ME 410(3) [1], MATSE 259(3) (Sem: 5-6)
IE 312(3), ME 450(3) [1] (Sem: 7-8)

ADDITIONAL COURSES (18 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
CHEM 112 GN(3), or BIOL 141 GN(3) (Sem: 1-2)
ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
ECON 102 GS(3), ECON 104 GS(3), ECON 14 GS(3), or EBF 200 GS(3) (Sem: 1-2)
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
ME 440(3); ME 442 WAC(2), ME 443 WAC(1) or ME 441(3) (Sem: 7-8)
Select 2 credits from ME 325(1), ME 315(1), ME 375(1), ME 355(1), or EMCH 316(1) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits in a 400-level ME Technical Elective course from department list excluding ME 410(3), ME 440(3), ME 441(3), ME 442(2), ME 443(1), ME 450(3), ME 494(1-9), and ME 496(1-18) (Sem: 5-8)
Select 6 credits in Engineering Technical Elective courses from department list
Select 3 credits in General Technical Elective courses from department list (Sem: 7-8)
(Students who complete Basic ROTC may substitute 6 of the ROTC credits for 3 credits of GTE and 3 credits of GHA.)
Three rotations of Engr Co-op (ENGR 295, ENGR 395, and ENGR 495) can be used as 3 credits of GTE.

Integrated B.S. and M.S. in Mechanical Engineering

A limited number of undergraduate students in the B.S.M.E. program will be considered for admission to the integrated undergraduate/graduate program leading to the B.S.M.E. and the M.S.M.E. degrees. Students with a junior standing in the B.S.M.E. degree program may be admitted to the integrated B.S.M.E./M.S.M.E. program, following a positive review of an application specific to this program by the faculty committee on graduate admissions. Students must have attained a GPA of at least 3.0. Students admitted to the integrated program must maintain a GPA in all classes used toward the M.S.M.E. degree of at least 3.0.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-042

Review Date: 8/22/2017

R & T: Approved 5/24/2013

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

[Comments](#)

EN

Mechanical Engineering Technology

Capital College (M E T)

PROFESSOR RICHARD CIOCCI, *Associate Professor Mechanical Engineering*

The goal of the Mechanical Engineering Technology program is to provide our students with the necessary training and education so that they can provide high-level technical support to a variety of industrial, commercial, consulting, and governmental organizations. The emphasis of our program is in the application of scientific and engineering principles. Technical communication in oral and written form is also emphasized. Our graduates are expected to appreciate the ethical and societal responsibilities of a technologist, the concepts of Continuous Quality Improvement and the continuing impact of globalization of design, manufacturing and marketing of technical goods and services. Our graduates are trained to deal with choice of materials and methods that are safe, environmentally and aesthetically acceptable and economically competitive. Typical responsibilities that may be assigned to our graduates are the development and evaluation of machines and mechanisms; development, organization and supervision of manufacturing processes and procedures; the instrumentation, control and testing of a process; quality control; technical marketing and sales; design of mechanical systems for heating and cooling and energy management.

The strengths of our program include: hands-on training; extensive laboratory experience; state of the art computer methods, excellent job placement and accreditation by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

Graduates who wish to continue their professional development can take the Fundamentals of Engineering exam in Pennsylvania, a prerequisite for taking the Professional Engineering exam.

Entry to Major Requirements:

Entry to the Mechanical Engineering Technology major requires a 2.00 or higher cumulative grade-point average.

Re-enrollment:

Associate degree students should file a re-enrollment form during the final semester of their associate degree. Students re-enrolling from an associate's degree into the bachelor's degree should run a degree audit from LionPATH, using the M E T major code, to determine their curriculum requirements.

For a B.S. degree in Mechanical Engineering Technology, a minimum of 128 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in GENERAL EDUCATION or REQUIREMENTS FOR THE MAJOR course selection including Supporting Courses and Related Areas)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 104 credits

(This includes 21 credits of General Education courses: 3 credits of GWS courses; 9 credits of GN courses; 6 credits of GQ courses, 3 credits of GS courses.)

PRESCRIBED COURSES (49 credits)

CHEM 110 GN(3), CHEM 111 GN(1) (Sem: 1-4)

MATH 140 GQ(4) (Sem: 1-5)

ENGL 202C GWS(3) (Sem: 3-4)

ENGR 320Y GS;US;IL(3) [\[1\]](#), IET 321(3), MET 321(2), MET 332(3) [\[1\]](#), MET 336(3) [\[1\]](#), MET 338(1), MET 341(3) [\[1\]](#), MET 358(3), MET 370(1), MET 431(3) [\[1\]](#), MET 438(3), MET 454(3), MET 458(1), MET 481(3), MET 486(3) (Sem: 5-8)

ADDITIONAL COURSES (34-38 credits)

Select 3 credits from: EDSGN 100(3) or EGT 120(3) (Sem: 1-2)

Select 3-4 credits from: PHYS 150 GN(3) or PHYS 211 GN(4) (Sem: 1-2)

Select 3 credits from: EMCH 211(3) or ET 300(3) or MCHT 111(3) [\[1\]](#) (Sem: 2-3)

Select 3-4 credits from: PHYS 151GN(3) or PHYS 212 GN(4) (Sem: 2-4)

Select 3 credits from: IET 101(3) or IET 311(3) (Sem: 2-5)

Select 3-4 credits from: IET 215(2) and IET 216(2) or IET 321(3) (Sem: 2-5)

Select 4 credits from: STAT 200 GQ(4) or MATH 141 GQ(4) (Sem: 2-6)

Select 3 credits from: EMCH 212(3), ET 321(3), or MET 206(3) [\[1\]](#) (Sem: 3-4)

Select 3 credits from: EMCH 213(3), ET 322(3), or MCHT 213(3) [\[1\]](#) (Sem: 3-4)

Select 3 credits from: MET 210(3) or MET 365(3) (Sem: 3-6)

Select 3-4 credits from: EET 101(3) and EET 109(1); or EET 320(3) (Sem: 3-7)

SUPPORTING COURSES AND RELATED AREAS (17-21 credits)

Select 5-9 credits from the department approved list of courses. (Sem: 5-8)

Select 12 credits from 300-400 level technology and engineering elective courses in consultation with an academic adviser and in support of the student's interests. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-05-015

Review Date: 2/21/17

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

[Comments](#)

CL

Management Information Systems

University Park, Smeal College of Business (M I S)

PROFESSOR JOHN E. TYWORTH, *Chair of the Department of Supply Chain and Information Systems*

The Management Information Systems major focuses on IT-supported techniques for exploring, analyzing, integrating, and reporting business data to facilitate fact-based decisions and enterprise-wide management. The framework encompasses the concepts, principles, and methods for (1) collecting, transforming, and managing data, (2) doing business analytics, (3) communicating and sharing the results, (4) aligning IT-enabled business analytics with business strategy. Students in this major have the opportunity to take nine credits of supporting work in functional business areas such as accounting, finance, marketing, risk management, and supply chain management. Graduates develop cross-functional literacy in how techniques and technologies help achieve business objectives, along with competency in applying business analytics methods on behalf of the business and in a supporting business area. Thus, graduates are well-prepared for careers in industry, consulting, and government sectors as business analytics professionals.

More information about the broad range of career opportunities is available at <http://www.smeal.psu.edu/scis/recruit>.

Entrance Requirement: To be eligible for entrance into the Management Information Systems (M I S) major, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy requirements for entrance to the major.

Specific entrance requirements include:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4)[\[1\]](#); ECON 102 GS(3); SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#); ENGL 15 GWS(3) or ENGL 30 GWS(3); and MATH 110 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#); FIN 301(3)[\[1\]](#); MGMT 301(3)[\[1\]](#); and MKTG 301(3)[\[1\]](#). These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu>).

For the B.S. degree in Management Information Systems, a minimum of 120 credits is required (at least 15 credits must be taken at the 400 level).

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES :

(Included in ELECTIVES or GENERAL EDUCATION selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14 credits

REQUIREMENTS FOR THE MAJOR: 73 credits

(This includes 12 credits of General Education: 3 credits of GWS courses; 6 credits of GQ courses; 3 credits of GS courses.)

PRESCRIBED COURSES (52 credits)

ACCTG 211(4)[\[1\]](#), ECON 102 GS(3), FIN 301(3)[\[1\]](#), MGMT 301(3)[\[1\]](#), MKTG 301(3)[\[1\]](#) (Sem: 1-4)

MIS 204(3)[\[1\]](#), MIS 301(3)[\[1\]](#), SCM 301(3) (Sem: 3-5)

BA 342(3), BA 411(3), BLAW 341(3), ECON 104 GS(3), ENGL 202D GWS(3), MIS 431(3)[\[1\]](#), MIS 432(3)[\[1\]](#), MIS 446(3)[\[1\]](#), MIS 479(3)[\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (11 credits)

MATH 110 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#) (Sem: 1-2)

SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#) (Sem: 1-2)

MIS 434(3)[\[1\]](#) or MIS 441(3)[\[1\]](#) (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS (10 credits)

Select 4 credits: Attainment of 12th-credit-level proficiency in a single foreign language(4 credits) Proficiency must be demonstrated by either examination or course work (Sem: 1-4)

Select 6 credits of supporting coursework. See department list (Sem: 5-8)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lastest Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-025

Review Date: 04/08/2014

UCA Revision #1: 8/9/06

BA

Project and Supply Chain Management

Penn State Erie, The Behrend College (PSCM)

Penn State Harrisburg, Capital College (PSMCA)

University College: Penn State Beaver, Penn State Fayette, Penn State Greater Allegheny, Penn State Lehigh Valley, Penn State New Kensington, and Penn State Shenango

The Project and Supply Chain Management major concentrates on developing knowledge, skills, and abilities in both project and supply chain management, dynamic and important disciplines in modern corporations. Project management skills include the development of new projects, and coordinating procurement and project delivery systems. Supply chain management emphasizes the integration of manufacturing and service operations, logistics, purchasing, and distribution that enable organizations to develop value-creating supply chain networks. The major provides students with an opportunity to develop the quantitative and people skills necessary to design and operate today's complex management systems. Students learn how to manage critical components in organizational supply chains, and apply business analytic methods for organizing and fully integrating supply chain practices throughout the organization.

Graduates are uniquely well-prepared for careers in some of the highest in-demand professions in the modern business and government environments, managing the supply chain and project initiatives in world-class business firms, public sector organizations, construction, IT organizations, third-party logistics providers, and goods and services distribution operations.

Entry to Major Requirements:

Entry to the Management major requires the completion of 5 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); MATH 110 GQ(4) or MATH 140 GQ(4); STAT 200 GQ(4) or SCM 200(4), and a 2.00 or higher cumulative grade-point average.

For the B.S. degree in Project and Supply Chain Management, a minimum of 120 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 2 credits

REQUIREMENTS FOR THE MAJOR: 88 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (40 credits)

ACCTG 211(4), ECON 102 GS(3), ECON 104 GS(3), ENGL 202D GWS(3) (Sem: 3-4)
FIN 301(3)[1], MGMT 301(3)[1], MIS 204(3), MKTG 301(3)[1], SCM 301(3)[1] (Sem: 3-6)
MGMT 341(3)[1] (Sem: 5-6)
MGMT 418(3)[1], SCM 445(3)[1], SCM 460(3)[1] (Sem: 6-8)

ADDITIONAL COURSES (36 credits)

Select 4 credits from: MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)
Select 4 credits from: SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)
Select 4 credits from: BA 241(2) and BA 242(2); or BA 243(4) (Sem: 3-6)
Select 3 credits from: MGMT 410(3)[1]; BA 421(3)[1] (Sem: 5-6)
Select 3 credits from: BA 364(3)[1], ECON 470(3)[1], FIN 471(3)[1], MGMT 461 IL(3)[1], MKTG 445 IL(3)[1], IB 303 IL(3)[1], or other 400-level international business courses [1] (Sem: 5-8)
Select 6 credits of 300- or 400-level courses in one business supporting area or PSCM electives from MGMT 420(3)[1], MGMT 431(3)[1], MGMT 432(3)[1], MGMT 433(3)[1], MGMT 440(3)[1], MGMT 453(3)[1], MGMT 466(3)[1], or MGMT 483(3)[1], BA 321(3)[1], or BA 322(3)[1] (Sem: 5-8)
Select 3 credits from ECON 481(3)[1] or MIS 336(3)[1] or MIS 301(3)[1] (Sem: 6-8)
Select 3 credits from: MGMT 415(3)[1] or SCM 416(3)[1] (Sem: 6-8)
Select 3 credits from: SCM 320(3)[1] or SCM 455(3)[1] (Sem: 6-8)
Select 3 credits from: BA 462(3)[1] or MGMT 471W(3)[1], BA 422W(3)[1] (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits of approved electives courses from any area (see school list of suggested courses) (See the admission section in the general information section in this bulletin for the placement policy for Penn State foreign language courses.) (Sem: 1-8)

Integrated B.S. in Project and Supply Chain Management and M.B.A. in Business Administration, Penn State Harrisburg

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Project and Supply Chain Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Project and Supply Chain Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Project and Supply Chain Management and Master of Business Administration degrees. The total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program. Students in the IUG program take three additional credits in their third year, and three fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

Students have the choice of receiving the B.S. in Project and Supply Chain Management degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Project and Supply Chain Management degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

ADMISSION REQUIREMENTS

To initiate the application process, students must submit a resume, a personal statement including career goals and how MBA will enhance their career goals, transcripts of courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Typical students would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211(4), ECON 102(3), ENGL 15 or 30(3), FIN 301(3), MATH 110 or 140(4), MGMT 301(3), MKTG 301(3) and STAT 200(4) or SCM 200(4).

To formally apply, students must submit a completed graduate school application. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

DEGREE REQUIREMENTS

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science in Project and Supply Chain Management and Master of Business Administration degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. All courses counted for both degrees must be at the 500- or 800-level.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-03-006

Review Date: 11/14/2017

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

BD

Mathematical Sciences

Capital College (MA SC)

PROFESSOR THANG N. BUI, *Program Chair, School of Science, Engineering, and Technology*

The two options and the variety of the course offerings provide concentrations in various areas such as actuarial science, management science/operation research, statistics, education, and preparation for graduate studies.

Small classes, excellent faculty, opportunities to work with faculty on projects, and strong employment prospects are just some of the strengths of the program. Students will be helped to develop: a solid foundation in mathematical studies; an awareness of the utility of mathematics, statistics, and computers; skills in translating practical problems into mathematical terms; a competency in the use of modern mathematical tools; problem-solving skills; and an awareness of the importance of mathematics in society.

The program is designed to prepare students for employment in business, industry, government, and education immediately after graduation, but graduate study in mathematics or related disciplines is also a viable alternative. Mathematical modeling is emphasized, and all students are required to take courses in statistics and computer science.

Entry to Major Requirements:

Entry to the Mathematical Sciences major requires that the student has completed with a grade of C or higher: MATH 140 GQ(4), MATH 141 GQ(4). A 2.00 or higher cumulative grade-point average is required.

The Mathematical Sciences Secondary Education Option prepares students to meet the requirements, as established by the Pennsylvania Department of Education, to be certified for the Instructional I Certificate in Mathematics at the secondary level.

Students admitted to the program must have the appropriate clearances. These include FBI fingerprint check, Act 151 child abuse history clearance, and Act 34 criminal record check.

Students thinking seriously about entering the education program should plan their freshman and sophomore years carefully. Semesters 5 through 8 are very structured.

Entry to the Mathematical Sciences Secondary Education option requires the following additional requirements:

1. a minimum cumulative grade-point average of 3.0
2. completion of ENGL 15 GWS(3) or ENGL 30 GWS(3) and three credits of literature from approved list with a C or higher grade
3. Satisfaction of any entrance testing requirements set out by the Pennsylvania Department of Education in effect at the time of application for the major

Selective Retention:

Following entrance to the major, students will be evaluated for retention in the program based on:

1. maintaining a cumulative GPA of 3.0 or higher;
2. completion of required courses with a C or higher grade;
3. an acceptable or above rating on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

To be eligible to student teach, students must:

1. maintain a cumulative GPA of 3.0 or higher;
2. complete all required Content and Education Courses with a C or higher grade;
3. satisfy any entrance testing requirements set out by the Pennsylvania Department of Education in effect at the time of application for entrance to major;
4. be rated acceptable or above on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

In order to successfully complete the Secondary Education Mathematics Program, students must:

1. complete EDUC 490 with a grade of C or higher;
2. maintain a cumulative GPA of 3.0 or higher;
3. complete all required Content and Education Courses with a C or higher grade;
4. pass the Penn State Harrisburg Mathematics Content Exam with an 80% or higher
5. complete a presentation portfolio; and
6. be rated acceptable or above on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

For a B. S. degree in Mathematical Sciences, a minimum of 120 credits is required.

For a B. S. degree in Mathematical Sciences with the Secondary Education option, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(9 to 18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 83-96 credits

(This includes 9-18 credits of General Education courses; 3 credits of GWS courses; 6 credits of GQ courses. In addition, the Secondary Education option includes 6 credits of GH courses and 3 credits of GS courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 20-21 credits

PRESCRIBED COURSES (20-21 credits)

MATH 140 GQ(4) [\[11\]](#), MATH 141 GQ(4) [\[11\]](#) (Sem: 1-2)

ENGL 202C GWS(3) (Sem: 4)

MATH 311W(3-4) [\[11\]](#), MATH 430(3) [\[11\]](#) (Sem: 5)

MATH 401(3) [\[11\]](#) (Sem: 6)

REQUIREMENTS FOR THE OPTION: 63-75 credits

GENERAL MATHEMATICAL SCIENCES OPTION: (64-65 credits)

PRESCRIBED COURSES (28-29 credits)

CMPSC 121 GQ(3), MATH 230(4) (Sem: 3)

MATH 220 GQ(2-3), MATH 251(4) (Sem: 4)

MATH 318(3) (Sem: 5)

MATH 455(3) [\[11\]](#), STAT 301GQ(3) (Sem: 6)

MATH 435(3), MATH 475 US;IL(3) (Sem: 7)

ADDITIONAL COURSES (3 credits)

Select 3 credits from: MATH 412(3) or MATH 425(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (33 credits)

Select 6 credits of 200 level or above courses. (Sem: 5-6)

Select 18 credits of 300-400 level Mathematics courses in consultation with an academic adviser. Up to 6 of these credits may be replaced by any 200 or greater level CMPSC courses or CMPSC 122. (Sem: 5-8)

Select 9 credits of 300-400 level courses in consultation with an academic adviser and in support of the student's interests. (Sem: 5-8)

SECONDARY EDUCATION IN MATHEMATICAL SCIENCES OPTION: (63-75 credits)**PRESCRIBED COURSES** (51-63 credits)

HDFS 239 GS(3) (Sem: 1-4)

CMPSC 121 GQ(3) [\[1\]](#), EDPSY 14(3) [\[1\]](#), MATH 230(4) [\[1\]](#) (Sem: 3)

CI 280 GH(3) [\[1\]](#), MATH 220 GQ(2-3) [\[1\]](#), MATH 250(3) [\[1\]](#) (Sem: 4)

EDUC 313(2) [\[1\]](#), EDUC 314(3) [\[1\]](#) (Sem: 5)

EDUC 315 US(3) [\[1\]](#), EDUC 458(3) [\[1\]](#), MATH 427(3) [\[1\]](#), STAT 301 GQ(3) [\[1\]](#) (Sem: 6)

EDUC 417(3) [\[1\]](#), EDUC 459(3) [\[1\]](#), MATH 435(3) [\[1\]](#), MATH 475 US;IL(3) [\[1\]](#) (Sem: 7)

EDUC 490(1-12) [\[1\]](#) (Sem: 8)

ADDITIONAL COURSES (3 credits)

Select 3 credits from MATH 425(3) or MATH 412(3) [\[1\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits of literature (GH) from department list. [\[1\]](#) (Sem: 1-3)

Select 3 credits of 100-400 level courses (Sem: 4)

Select 3 credits of 300-400 level courses in Mathematics, Computer Science, Statistics, or Education. [\[1\]](#) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-03-016

Review Date: 11/15/2016

R & T: 02/24/2015

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

CL

Materials Science and Engineering

University Park, College of Earth and Mineral Sciences (MATSE)

PROFESSOR GARY L. MESSING, Head, Department of Materials Science and Engineering

PROFESSOR R. ALLEN KIMEL, Associate Head of Undergraduate Studies, Materials Science and Engineering

Materials, like ceramics, metals, polymers, and composites, are critical to the growth and success of many industries and key to most engineering disciplines. Graduates of Materials Science and Engineering are employed, or proceed to graduate studies, in many fields such as energy, medicine, sustainability, electronics, communications, transportation, aerospace, defense, and infrastructure industries.

The mission of the department is to provide students with a well-rounded engineering education, with specific emphasis on materials science and engineering in order to meet the needs of industry, academia, and government; to conduct research at the frontiers of the field; and to provide an integrating and leadership role to the broad multidisciplinary materials community.

The integration of knowledge and skills acquired during the course of study in the Materials Science and Engineering program provides graduates with the following student outcomes:

- a) Graduates will be able to apply knowledge of mathematics and advanced science and engineering principles to materials systems.
- b) Graduates will be able to design and conduct experiments and to analyze and interpret data.
- c) Graduates will be able to design a process, a microstructure, or a component to satisfy system needs.
- d) Graduates will be able to function on multi-disciplinary teams.
- e) Graduates will be able to identify, formulate, and solve engineering problems.
- f) Graduates will understand professional and ethical responsibility.
- g) Graduates will be able to communicate effectively, both in writing and in speech.
- h) Graduates will possess the broad education necessary to understand the impact of engineering solutions in a global and societal context.
- i) Graduates will recognize the need for, and be able to engage in, lifelong learning.
- j) Graduates will have a knowledge of contemporary issues.
- k) Graduates will be able to use the experimental, analytical, statistical, and computational tools for engineering practice in the materials discipline.
- l) Graduates will be able to apply the fundamental principles underlying and connecting the structure, processing, properties, and performance of materials systems.

The educational objectives of the undergraduate program are embedded into our mission statement. We will provide and maintain a curriculum that will prepare our recent graduates to accomplish the following Program Educational Objectives:

1. Our graduates provide science and engineering leadership in international industrial, governmental, and academic settings, while serving both their profession and the public.
2. Our graduates are innovators in a wide variety of technical fields including, but not limited to, materials, energy, electronics, medicine, communications, transportation, and recreation.
3. Our graduates excel in careers relating to the entire life cycle of materials, from synthesis and processing, through design and development, to manufacturing, performance, reclamation, and recycling.
4. Our graduates engage in lifelong learning activities which enhance their careers and provide flexibility to respond to changing professional and societal needs.

We achieve these objectives by providing a rigorous but flexible curriculum that allows the student to design their degree in materials science and engineering to achieve their specific academic and professional career interests.

In addition to the cutting edge curriculum, we provide many opportunities to strengthen the student's undergraduate studies through research experiences. For example, over 60% of the undergraduates are members of a research group and participate in the extensive materials research programs at Penn State. Further, we provide opportunities for International Internships in Materials, where our students go abroad to perform research at one of the many internationally recognized partner universities in Europe and Asia.

The B.S. degree in Materials Science and Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: 410.347.7700 or www.abet.org.

Entrance to Major Requirements: In order to be eligible for entrance to the Materials Science and Engineering major, a student must have: 1) Attained at least a 2.00 cumulative grade-point average. 2) Completed CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4), MATH 141 GQ(4), MATH 220(2) and PHYS 211(4); earned a grade of C or better in each of these courses; and earned a combined grade point average of at least 2.50 in these courses. (Note: If courses are repeated, only the higher grade will be used in this calculation.)

For the B.S. in Materials Science and Engineering, a minimum of 131 credits is required. This baccalaureate program in Materials Science and Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION 45 credits

(24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of *Bulletin*. Note: The Accreditation Board for Engineering and Technology (ABET) does not permit the use of skills courses to satisfy the Arts category of General Education.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 110 credits

(This includes 24 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (79 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 113 GN(1), CHEM 202 GN(3), CMPSC 200 GQ(3), EMSC 100S GWS(3) [\[71\]](#), MATH 140G GQ(4), MATH 141G GQ(4), MATH 220 GQ(2), MATH 231(2), MATH 251(4), MATSE 112 GN(3), PHYS 211 GN(4), PHYS 212 GN(4), IE 424(3) (Sem: 1-4)

MATSE 201(3) [\[11\]](#), MATSE 202(3) [\[11\]](#), MATSE 413 GN(3) (Sem: 3-4)

ENGL 202C GWS(3), MATSE 400(3) [\[1\]](#), MATSE 401(3) [\[11\]](#), MATSE 402(3) [\[11\]](#), MATSE 419(3), MATSE 430(3) [\[11\]](#), MATSE 436(3), MATSE 460(1), MATSE 462(1), MATSE 492(3) [\[11\]](#) (Sem: 5-6)

ADDITIONAL COURSES (19 credits)

ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-4)

Select 3 or 6 credits from Synthesis and Processing: MATSE 411(3), MATSE 422(3), MATSE 425(3), MATSE 441(3), MATSE 448(3), MATSE 450(3) (Sem: 6-8)

Select 3 or 6 credits from Structure and Characterization: MATSE 410(3), MATSE 415(3), MATSE 421(3), MATSE 444(3), MATSE 445(3), MATSE 455(3) (Sem: 6-8)

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Select 3 or 6 credits from Properties: MATSE 412(3), MATSE 417(3), MATSE 435(3), MATSE 446(3), MATSE 447(3) (Sem: 6-8)

Select 1 credit from Processing Laboratory: MATSE 463(1), MATSE 468(1), MATSE 472(1), MATSE 474(1) (Sem: 7)

Select 3 credits from Senior Capstone Experience: MATSE 493(3) or MATSE 494W(3) (Sem: 7-8)

SUPPORTING COURSE AND RELATED AREAS (12 credits)

Select 12 credits of approved Science or Engineering Elective courses in consultation with advisor (Sem: 6-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[71] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EMSC 100 GWS.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-021

Review Date: 8/22/2017

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

EM

Mechanical Engineering

Penn State Berks (ME BL)

Penn State Erie, The Behrend College (ME BD)

Penn State Harrisburg (ME CA)

Built upon a broad foundation in physics, chemistry, and mathematics, this major has the objective of educating graduates to be problem solvers. Graduates of this program will have had opportunities to learn about applying scientific principles, engineering analysis, and engineering design to solve unstructured problems that are typical of those found in mechanical engineering. The major helps prepare graduates for a lifelong productive career, whether they choose professional practice, graduate school, or some other career path. Graduates will have had opportunities to learn how to work with others toward a common goal, to clearly express their ideas in written and verbal form, and to be independent and capable of adapting to the continuously changing technology of the work environment.

After completing the fundamental science core, students may pursue their interest in mechanical engineering by studying fluid and solid mechanics, engineering materials and their properties, thermodynamics and heat transfer, computer-aided design, kinematics and dynamics of machine elements, machine design, finite elements, control systems, electricity, and electronic instrumentation and machinery. The students will be required to analyze and solve a significant mechanical engineering design problem during their senior year.

Entrance Requirement: In addition to the Carnegie unit and minimum GPA requirements* described by University policies, all students applying for entrance to any of the engineering majors at Behrend, Berks, or Capital college must have at least a 2.0 cumulative GPA by the end of the semester prior to applying for entrance to the major and have completed, with a minimum grade of C: CHEM 110 GN(3), MATH 140 GQ(4), MATH 141 GQ(4), and PHYS 211 GN(4). These courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed.

For the B.S. degree in Mechanical Engineering, a minimum of 131 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 107-108 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (88-89 credits)

CHEM 110 GN(3) [\[1\]](#), EDSGN 100S(3) (Sem: 1-2)

EE 211(3), EMCH 211(3) [\[1\]](#), EMCH 212(3) [\[1\]](#), EMCH 213(3) [\[1\]](#), ME 300(3) [\[1\]](#), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), MATH 220(2-3) [\[1\]](#), MATH 230(4),

MATH 251(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#), PHYS 212 GN(4) (Sem: 1-4)

CMPS 200 GQ(3), ENGL 202C GWS(3) (Sem: 3-6)

ME 320(3) [\[1\]](#), ME 345W(4) [\[1\]](#), ME 349(3) [\[1\]](#), ME 357(3) [\[1\]](#), ME 365(1) [\[1\]](#), ME 367(3) [\[1\]](#), ME 380(3) [\[1\]](#), ME 410(3) [\[1\]](#) (Sem: 5-6)

ME 448(3) [\[1\]](#), ME 449(3) [\[1\]](#), ME 468(3) [\[1\]](#), MATSE 259(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-6)

CHEM 111 GN(1) and PHYS 214(2); or CHEM 112 GN(3), or BIOL 141 GN(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (13 credits)

Select 13 credits of program elective courses [\[1\]](#) from school-approved list. (These credits must be selected to fulfill the thematic requirements of the major.) (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-04-098

Review Date: 01/11/2011

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

BD

Media Studies

University Park, Donald P. Bellisario College of Communications (MEDIA)

PROFESSOR ANTHONY OLORUNNISOLA, Head, Department of Film-Video and Media Studies

This major is designed for students who want to pursue an academic rather than professional program of media studies. Students are exposed first to the breadth of approaches to understanding the mass media (e.g., aesthetic, cultural, humanistic, social-behavioral) and then, by selecting one of four options, go into depth in a specialized area of media studies. All options within the major are closely intertwined with the liberal arts and sciences. Therefore, students who successfully complete this major must have a strong foundation in the liberal arts and well-developed language and analytical skills. That foundation should include courses such as ARTH 100 GA(3), ECON 102 GS(3), HIST 2 GH(3), PSYCH 100 GS(3), and SOC 1 GS(3).

The following four options are offered:

FILM AND TELEVISION STUDIES OPTION: This option is designed for students interested in studying the art, history, and criticism of film and television. Electives offer students the opportunity to pursue a related field, such as art, art history, creative writing, speech communication, or theatre arts. This option merges aesthetics and social sciences and is appropriate for those seeking a more theoretical/critical approach to the study of film and video.

INTERNATIONAL COMMUNICATIONS OPTION: This option is designed for students who want to study the mass media systems of the world and their role in international affairs. The option offers students an opportunity to enhance their occupational opportunities in international business, organizations, or government and to be better prepared to participate in the world community. Students must select either a University-approved minor in a foreign language, area studies, or international studies; a University-approved education abroad program; or other international-related courses or programs with prior departmental approval.

MEDIA EFFECTS OPTION: This option focuses on the social and psychological effects of media messages and technologies. Students progress through a general introduction to problems and issues, such as the effects of televised sex and violence, to courses that emphasize more theoretical approaches and advanced applications. A minor in a complementary area of study, such as Psychology or Sociology, is encouraged.

SOCIETY AND CULTURE OPTION: In this option, a student and faculty adviser work together to tailor a program of courses to meet the student's individual interest in a coherent theme in media studies. These courses are usually selected in tandem with a minor or other supporting cluster of non-major courses in the area of specialization. Examples of themes include, but are not limited to, communication and the environment, communication and health campaigns, sports and the media, minorities and the media, and gender and the media. A minor in an area of specialization is encouraged.

Students must select at least 72 credits in courses outside the Bellisario College of Communications.

For the B.A. degree in Media Studies, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(0-3 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 6-15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36-45 credits^[1]
(This includes 0-3 credits of General Education Courses: Film Option - 0-3 credits of GH or 0-3 credits of GA. Media Effects Option - 3 credits of GS.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 15 credits

PRESCRIBED COURSES (15 credits)
COMM 100 GS(3), COMM 304(3), COMM 305(3), COMM 405(3), COMM 413W(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 21-30 credits

FILM AND TELEVISION STUDIES OPTION: (21 credits)

PRESCRIBED COURSES (9 credits)
COMM 150 GA(3), COMM 242(3), COMM 250 GA(3) (Sem: 3-4)

ADDITIONAL COURSES (12 credits)
Select 9 credits from COMM 451(3), COMM 452(3), COMM 453 IL(3), COMM 454(3), COMM 455(3), COMM 495(1-3), or COMM 496(1-3) (Sem: 5-8)
Select 3 credits from CAS 415(3), CHNS 121 GH;IL(3), CMLIT 153 GH;IL(3), ENGL 403(3), FR 138 GH(3), FR 487 IL(3), FR 488 IL(3), IT 475(3), JAPNS 453 IL(3), MUSIC 4 GA(3), PHIL 5 GH(3) (Sem: 5-8)

INTERNATIONAL COMMUNICATIONS OPTION: (21-30 credits)

PRESCRIBED COURSES (9 credits)
COMM 110 GH(3), COMM 410 IL(3), COMM 419 US;IL(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)
Select 3 credits from COMM 118 GS(3), COMM 150 GA(3), COMM 205 US(3), COMM 320(3), COMM 381(3) or COMM 452(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (9-18 credits)
Select at least one of the following for a minimum of 9 credits and a maximum of 18 credits, no more than 9 credits in COMM. (Sem: 1-8)

University approved minor in foreign language, area studies or international studies

University approved education abroad program

Other international related courses or programs with prior departmental approval

More than one of the above is strongly recommended.

MEDIA EFFECTS OPTION:(21 credits)

PRESCRIBED COURSES (9 credits)
COMM 118 GS(3), COMM 418(3), PSYCH 100 GS(3)

ADDITIONAL COURSES (9 credits)

Select 3 credits from COMM 110 GH(3), COMM 150 GA(3), COMM 180(3), COMM 205 US(3), COMM 320(3), COMM 403(3) or COMM 412(3) (Sem: 3-4)

Select 3 credits from: COMM 325(3); COMM 326(3); COMM 327(3) (Sem: 3-7)

Select 3 credits from PSYCH 221 GS(3) or PSYCH 256 GS(3)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits in research methods from an approved department list (Sem: 1-8)

A minor in a complementary area of study is encouraged (e.g. Psychology or Sociology) (Sem: 1-8)

SOCIETY AND CULTURE OPTION: (21 credits)

PRESCRIBED COURSES (3 credits)

COMM 411(3)

ADDITIONAL COURSES (18 credits)

Select 6 credits from COMM 110 GH(3), COMM 118 GS(3), COMM 150 GA(3), or COMM 205 US(3) (Sem: 3-4)

Select 12 credits in communication theory from COMM 110 GH(3), COMM 118 GS(3), COMM 150 GA(3), COMM 170(3), COMM 180(3), COMM 408(3), COMM 409(3), COMM 410 IL(3), COMM 412(3), COMM 417(3), COMM 418(3), COMM 419 US;IL(3), COMM 451(3), COMM 452(3), COMM 453 IL(3), COMM 454(3), COMM 455(3) [At least 9 credits must be at the 400-level] (Sem: 5-8)

A minor in an area of specialization is encouraged.

Integrated B.A./M.A. in Media Studies

The Bellisario College of Communications offers academically qualified students enrolled in a Bachelor of Arts program in the Bellisario College of Communications the opportunity to earn both the B.A. and the M.A. upon completion of five years of study. The Integrated Undergraduate-Graduate Program in Media Studies would facilitate the advanced study of communications research and thesis development through a carefully organized selection of undergraduate courses, graduate seminars and directed research projects. The program would accelerate and enhance undergraduate students' appreciation for graduate level scholarship by involving them in the seminars, research activities and the scholarly discourse of the College's community of Masters and Doctoral-level scholars.

For the IUG Media Studies B.A./M.A. degree, a minimum of 120 credits are required for the B.A. and 36 credits for the M.A. Twelve graduate level credits, in consultation with the adviser, can apply to both the B.A. and M.A. degrees. Six of these must be at the 500 level.

If for any reason a student admitted to the B.A./M.A. program is unable to complete the requirements for the Master of Arts degree program in Media Studies, the student will be permitted to receive the BA degree assuming all degree requirements have been satisfactorily completed.

Application Process and Admissions Requirements

Applicants must complete 6 credits from the following lists of courses with a minimum GPA of 3.5 in order to be admitted: 3 credits from COMM 100, COMM 150, COMM 180, COMM 320, or COMM 370 and 3 credits from COMM 205, COMM 250, COMM 381, COMM 401, COMM 403, COMM 404, COMM 405, COMM 407, COMM 408, COMM 409, COMM 410, COMM 411, COMM 413, COMM 417, COMM 418, COMM 419, COMM 451, COMM 452, COMM 453, COMM 454, COMM 455, COMM 484, or COMM 485. The minimum overall GPA required of applicants is 3.2. Admission to the program is based on the evaluation of the student's transcript, examples of completed writing and research projects, a narrative statement of objectives, and two letters of support from faculty with whom they have worked. One faculty member must be from the Bellisario College of Communications. Students are expected to apply after completing 60 credits but before the completion of 100 credits. Candidates are expected to present records of outstanding scholarly achievement to qualify. Applications will be reviewed by the appropriate subset of members of the Graduate Committee of the College.

Applicants to the integrated program:

1. Must be enrolled in a B.A. program in the Bellisario College of Communications.
2. Must have completed 60 credits of the undergraduate degree program. (It is recommended that students apply prior to completing 100 credits.)
3. Must provide a narrative statement of objectives and two letters of endorsement from faculty with whom they have worked. One faculty member must be from the Bellisario College of Communications.
4. Must present an approved plan of study in the application process.

Program of Study

The Integrated B.A./M.A. degree in Media Studies is an academic program that involves students in the systematic study of media. The objective of the course of study is to enable students to achieve a comprehensive understanding of the systems, networks, cultures, and information associated with media. The program prepares students for doctoral study in communications and for professional positions in business and government requiring a comprehensive understanding of the historical, social, and political implications of the media. This program helps prepare students to organize research projects, critically evaluate research reports, and directly influence media practices by the application of research findings. The program is specifically not intended for advanced professional education.

Undergraduate tuition rates will apply as long as the student is in undergraduate status, unless the student receives financial support, such as an assistantship requiring the payment of graduate tuition.

Degree Requirements

For the IUG Media Studies M.A. degree, a minimum of 120 credits are required for the B.A. and 36 credits for the M.A. At least 18 of the required 36 credits must be at the 500 level. Twelve graduate level credits, in consultation with the adviser, can apply to both the B.A. and M.A. degrees. Six of these double-counted credits must be at the 500 level. A minimum of 12 credits of coursework, as opposed to research credits, must be completed in Communications. COMM 515 and COMM 506 or COMM 511 are required. IUG students will prepare a thesis proposal in consultation with their advisers and are required to present the final thesis in a formal oral defense meeting to a committee of at least 3 members of graduate faculty, two of whom must be members of the College faculty. It is encouraged that one member of the committee be from outside the College.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017 (MEDIA); Summer Session 2005 (Integrated B.A./M.A.)

Blue Sheet Item #: 46-02-014 (MEDIA); 33-04-161 (Integrated B.A./M.A.)

Review Date: 10/3/2017

UCA Revision #1: 8/20/06

UCA Revision #2: 7/30/07

Department head updated by Publications: 1/16/07

CM

Medieval Studies

University Park, College of the Liberal Arts (MEDVL)

PROFESSOR NORRIS LACY, *in charge*

This is an interdisciplinary program of study designed to give students an integrated knowledge of medieval civilization. While the main area of study is the fifth to sixteenth centuries in Europe, a global perspective is offered with particular attention to the Near East and the Pacific Rim.

For the B.A. degree in Medieval Studies, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 24 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 30 credits^[1]

PRESCRIBED COURSES (6 credits)

MEDVL 107 GH(3) or HIST 107 GH(3), MEDVL 108 GH(3) (Sem: 3-4)

ADDITIONAL COURSES (24 credits)

(A minimum of 12 credits must be in 400-level courses.)

Select 24 credits from the program list of courses dealing with the Middle Ages from no less than three of the following areas:

Art

ARTH 201 GA(3) (Sem: 1-8)

ARTH 312 GA(3) (Sem: 3-8)

ARTH 402(3), ARTH 412(3), ARTH 422(3-9), ARTH 442(3), ARTH 452(3) (Sem: 5-8)

History

HIST 105 GH;IL(3), HIST 108 GH;IL(3), HIST 141 GH;IL(3), HIST 165(3) (Sem: 1-8)

HIST 407 IL(3), HIST 408 IL(3), HIST 411(3), HIST 412 IL(3), HIST 413(3), HIST 471(3), HIST 480 IL(3) (Sem: 5-8)

Literature and Language

CMLIT 1 GH(3), CMLIT 106 GH;IL(3), ENGL 221W(3), GER 175 GH;IL(3), HEBR 10 GH;IL(3), SPAN 130 GH;IL(3) (Sem: 1-8)

FR 351(3), SPAN 353(3) (Sem: 3-8)

CMLIT 401 IL(3), CMLIT 408 IL(3), ENGL 441(3), ENGL 442(3), GER 430 IL(3), GER 431 IL(3), IT 415(3), IT 490(3), SPAN 418(3) (Sem: 5-8)

Medieval Studies

MEDVL 197(1-9), MEDVL 199 IL(1-12), MEDVL 294(1-12), MEDVL 299 IL(1-12) (Sem: 1-8)

MEDVL 395(1-18), MEDVL 399 IL(1-12) (Sem: 3-8)

MEDVL 411(3), MEDVL 413(3), MEDVL 494(1-12), MEDVL 496(1-18), MEDVL 497(1-9), MEDVL 499 IL(1-12) (Sem: 5-8)

Philosophy and Religious Studies

RLST 120 GH(3), PHIL 201 GH(3) (Sem: 1-8)

RLST 420(3) (upon advising) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 1999

Blue Sheet Item #: 27-07-065

Review Date: 4/8/03

LA

Mechanical Engineering Technology

Penn State Erie, The Behrend College (METBD)

This major may be taken either as a four-year baccalaureate program or in a "2+2" degree format. The latter allows graduates of associate degree programs in mechanical engineering technology or related areas to gain greater breadth and depth of knowledge in mechanical engineering technology. The baccalaureate program emphasizes applied design and analysis, complementing a hands-on manufacturing and materials focus. The graduate gains valuable knowledge of total manufacturing processes ranging from applied design to manufacture.

This major includes instruction in materials engineering, thermodynamics, heat transfer, hydraulics, finite-element analysis, and use of parametric solids modeling design packages, as well as supporting course work in mathematics and science. Oral and written communications are stressed, as is the ability to work within a team-oriented environment. The major culminates with a capstone design project involving an actual design or manufacturing problem sponsored by regional industry. This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Graduates have qualified for careers in a wide variety of industries that manufacture or use mechanical systems. Careers include positions in applied product design, manufacturing process development, field service support, supervision of manufacturing facilities, tool and die design, quality control, plant supervision and management, and technical sales.

Entrance to Major Requirements:

To be eligible for entrance to the Mechanical Engineering Technology major, a student must have: 1) attained at least a 2.00 cumulative grade-point average; 2) completed MATH 81 or MATH 26, and MATH 82 or MATH 22, and MATH 83 or MATH 140, and PHYS 250, and earned a grade of C or better in each of these courses.

For the B.S. degree in Mechanical Engineering Technology, a minimum of 131 credits is required. A student enrolled in this major must earn at least a grade of C in each 300- and 400-level course.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selection)

ELECTIVES: 0-1 credit

REQUIREMENTS FOR THE MAJOR: 103-106 credits

(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (73 credits)

ENGL 202C GWS(3), MCHT 111(3)[\[1\]](#), MET 107(3), PHYS 250 GN(4)[\[1\]](#), PHYS 251 GN(4) (Sem: 1-4)
MCHT 213(3)[\[1\]](#), MCHT 214(1), IET 215(2), IET 216(2), MET 206(3)[\[1\]](#), MATH 210 GQ(3)[\[1\]](#), MET 210(3)[\[1\]](#) (Sem: 3-4)
CHEM 110 GN(3), CHEM 111 GN(1), MATH 211 GQ(3), MET 306(3)[\[1\]](#), MET 320(3)[\[1\]](#), MET 330(3)[\[1\]](#), MET 331(4)[\[1\]](#), MET 341(3)[\[1\]](#), MET 415(3)[\[1\]](#) (Sem: 5-6)
MET 425(3)[\[1\]](#), MET 432(3)[\[1\]](#), MET 470(3)[\[1\]](#), MET 480(1)[\[1\]](#), MET 485(3)[\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (22-24 credits)

EET 100(3); or EET 101(3); or EET 105(3) and EET 109(1); IET 101(3)[\[1\]](#) or MET 105(3)[\[1\]](#) (Sem: 1-4)
MATH 26 GQ(3)[\[1\]](#) or MATH 81 GQ(3)[\[1\]](#), MATH 22 GQ(3)[\[1\]](#) or MATH 82 GQ(3)[\[1\]](#), MATH 83 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#) (Sem: 1-4)
EGT 120(3) and EGT 121(3); or EGT 101(1), EGT 102(1), EGT 114(2), EGT 201(2), and EGT 205(1) (Sem: 1-5)

SUPPORTING COURSES AND RELATED AREAS (8-9 credits)

Select 6 credits of technical electives from school-approved list (Sem: 7-8)

Select 2-3 credits of business electives from school-approved list (Sem: 6-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2010

Blue Sheet Item #: 39-03-028

Review Date: 11/9/2010

UCA Revision #1: 8/18/06

BD

Meteorology and Atmospheric Science

University Park, College of Earth and Mineral Sciences (METEO)

PROFESSOR David Stensrud, *Head of the Department*

Meteorology is a rigorous scientific discipline devoted to the attainment of an increased understanding of the atmosphere and the development of methods for applying that knowledge to practical problems. Although this field is usually associated with weather prediction, it also has significance in environmental, energy, agricultural, oceanic, and hydrological sciences. For students wishing to pursue many of these areas, the department offers several options within the major.

The major requires a solid foundation in mathematics and the physical sciences, and it provides a comprehensive survey of the fundamentals of atmospheric science. It has sufficient flexibility to permit intensive advanced study in such related areas as mathematics, earth sciences, or engineering. The department has particular strengths in weather analysis and prediction, including forecast uncertainty and severe weather; physical meteorology, including radar meteorology, instrumentation and atmospheric measurements; and applied areas, including atmospheric diffusion, air pollution chemistry, dynamic meteorology, tropical meteorology, climate, weather risk, and remote sensing.

Graduating meteorologists are prepared for professional employment with industry, private consulting firms, government, and the armed forces or for further study toward graduate degrees normally required for research, university, or management positions.

The freshman and sophomore years are largely devoted to preparatory work in science, mathematics, and the liberal arts. The junior and senior years involve a core of basic courses in applied and theoretical topics and a choice of courses offering specialized training. The courses unique to each option are normally taken in the junior and senior years.

Entry to Major Requirements:

In addition to the minimum grade point average (GPA) requirements described in the University Policies, the Meteorology entrance-to-major requirement must also be completed with a minimum grade of C: MATH 140 GQ(4).

ATMOSPHERIC SCIENCE OPTION: This option challenges students to strengthen and broaden their understanding of the physics and chemistry of both the atmosphere and oceans. It helps prepare them for employment in the diverse field of the atmospheric sciences and for graduate study in the atmospheric or related disciplines. Students are encouraged to participate in undergraduate research projects under the supervision of atmospheric and oceanic scientists in the department college.

ENVIRONMENTAL METEOROLOGY OPTION: Environmental Meteorology prepares the student for understanding the impact of the weather and climate on the environment, which is to say the impacts of air and water on natural and human-altered ecosystems. In order to do this, the option establishes links between atmospheric physics and a variety of environmental disciplines pertaining to land, water, soils, and plants. Depending on his/her interests, the student will select courses in the Air Quality and Dispersion, Ecology, Environmental Chemistry, Geographic Information Systems or Hydrology.

GENERAL OPTION: This option has sufficient flexibility to serve the needs of students who wish to pursue topics chosen broadly from subdisciplines of meteorology or from related areas in consultation with the academic adviser. The General option is appropriate both for students who intend to pursue postgraduate degrees and for students who want to emphasize a topic for which no option exists.

WEATHER FORECASTING AND COMMUNICATIONS OPTION: This option prepares students for careers in which their skills as weather forecasters are effectively used in a variety of ways, from science reporting and television broadcasting to web design and computer-based weather graphics production, and developing innovative applications of weather and climate data to industry.

WEATHER RISK MANAGEMENT OPTION: The option combines study of meteorology and atmospheric sciences with training in risk, finance, and quantitative decision-making. Weather affects a wide range of industries, including energy, agriculture, insurance, construction, retail, and transport, among others. Weather and climate variation play central roles in the availability of water resources, the spread of disease, and an array of other processes vital for human welfare. There are, consequently, many organizations that confront risks related to weather, and that have a demand for experts who can help them manage these risks. The option in Weather Risk Management is designed for students who wish to work professionally at this intersection of meteorology and risk management.

For a Meteorology course to serve as a prerequisite for any subsequent prescribed or supporting Meteorology course in the major, a grade of C or better must be earned in the prerequisite course.

For the B.S. degree in Meteorology, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(23-26 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 4-9 credits

REQUIREMENTS FOR THE MAJOR: 93-95 credits

(This includes 23-26 credits of General Education courses: 8 credits of GN courses; 6 credits of GQ courses; 0-3 credits of GS courses; 9 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 66 credits

PRESCRIBED COURSES (47 credits)

CHEM 110 GN(3), EMSC 100S GWS(3) [\[71\]](#), MATH 140 GQ(4) [\[11\]](#), MATH 141 GQ(4) [\[11\]](#), PHYS 211 GN(4) (Sem: 1-2)

MATH 251(4), PHYS 212 GN(4) (Sem: 3-4)

METEO 300(4) [\[11\]](#), METEO 411(4) [\[11\]](#), METEO 421(4) [\[11\]](#), METEO 431(3) [\[11\]](#), METEO 440(3) [\[11\]](#) (Sem: 5-6)

METEO 470(3) [\[11\]](#) (Sem: 6-8)

ADDITIONAL COURSES (19 credits)

ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

METEO 101 GN(3) [\[11\]](#) or METEO 200A(1.5) [\[11\]](#) and METEO 200B(1.5) [\[11\]](#) or METEO 201(3) [\[11\]](#) (Sem: 1-5)

METEO 273(3) or CMPSC 101 GQ(3) or CMPSC 200 GQ(3) or CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 2-4)

MATH 230(4) [\[11\]](#) or MATH 231(2) [\[11\]](#) and MATH 232(2) [\[11\]](#) (Sem: 3-4)

EBF 472(3) or STAT 301 GQ(3) or STAT 401(3) (Sem: 3-6)

CAS 100 GWS(3) or ENGL 202C GWS(3) (Sem: 3-8)

REQUIREMENTS FOR THE OPTION: 27-29 credits

ATMOSPHERIC SCIENCE OPTION: (27-28 credits)

PRESCRIBED COURSES (3 credits)

METEO 422(3) (Sem: 6-8)

ADDITIONAL COURSES (21-22 credits)

Select 3-6 credits from METEO 473(3)[1] and METEO 474(3)[1] (Sem: 5-8)

Select 6-9 credits from METEO 436(3)[1], METEO 437(3)[1], and METEO 454(3)[1] (Sem: 5-8)

Select 6-13 credits from METEO 414(4), METEO 434(3), METEO 451(3), METEO 452(3), METEO 455(3), METEO 465(3), METEO 466(3), METEO 471(3), METEO 477(3), METEO 480W(3) (Up to 9 of these credits in relevant courses in Acoustics, Chemistry, Engineering, Mathematics, and Physics may be substituted with the approval of the student's adviser.) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits of W courses or their equivalent in addition to METEO 440. (Sem: 7-8)

ENVIRONMENTAL METEOROLOGY OPTION: (27-29 credits)

PRESCRIBED COURSES (9 credits)

CE 370(3), METEO 454(3)[1], METEO 455(3) (Sem: 2-8)

ADDITIONAL COURSES (18-20 credits) (May apply to General Education)

Select 15-17 credits from BIOL 110 GN(4), CE 360(3), CE 461(3), CE 475(4), CE 479(3), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 450(3), CHEM 457(2), CHEM 464(3), ERM 430(3), ERM 435(3), ERM 447(3), ERM 450(3), GEOG 314 GN(3), GEOG 311(3), GEOG 361(3), GEOG 362(3), GEOG 363(3), GEOG 417(3), GEOG 463(3), ME 405(3), ME 433(3), METEO 419(3), METEO 437(3) (Sem: 2-8)

Select 3 credits from METEO 473(3)[1] or METEO 474(3)[1] (Sem: 5-8)

GENERAL OPTION: (27 credits)

ADDITIONAL COURSES (6 credits)

Select 3 credits from METEO 436(3)[1] or METEO 437(3)[1] or METEO 454(3)[1] (Sem: 5-8)

Select 3 credits from METEO 473(3)[1] or METEO 474(3)[1] (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 21 credits in consultation with advisor from 400-level METEO courses and/or 300-, or 400-level courses from the Colleges of Agricultural Sciences, Earth and Mineral Sciences, Engineering, and/or Science. With the approval of a meteorology adviser, some 200-level courses from those Colleges may also be used. (Sem: 7-8)

WEATHER FORECASTING AND COMMUNICATIONS OPTION: (28 credits)

PRESCRIBED COURSES (13 credits)

METEO 481(3), METEO 482(3) (Sem: 5-6)

METEO 414(4), METEO 415(3) (Sem: 6-8)

ADDITIONAL COURSES (15 credits)

Select 3 credits from METEO 436(3)[1] or METEO 437(3)[1] (Sem: 5-8)

Select 3-6 credits from METEO 473(3)[1] and METEO 474(3)[1] (Sem: 5-8)

Select 6-9 credits from EE 477(3) or METEO 477(3); ENGL 416(3), GEOG 333(3), GEOG 361(3), GEOG 362(3), GEOG 363(3), GEOG 417(3), GEOG 467(3), GEOSC 402 IL(3), METEO 413(3), METEO 416(3), METEO 418(3), METEO 419(3), METEO 422(3), METEO 434(3), METEO 451(3), METEO 452(3), METEO 454(3), METEO 471(3), METEO 483(3), METEO 486(1-2, max 3), any two from METEO 495A(3), METEO 495B(3), METEO 495C(3), METEO 495D(3) or METEO 495E(3) (Sem: 5-8)

WEATHER RISK MANAGEMENT OPTION: (27 credits)

PRESCRIBED COURSES (9 credits)

ECON 102 GS(3) (Sem: 1-2)

EBF 473(3) (Sem: 3-6)

METEO 460(3) (Sem: 7-8)

ADDITIONAL COURSES (18 credits)

Select 6 credits from METEO 415(3), METEO 473(3)[1] or METEO 474(3)[1] (Sem: 5-8)

Select 3 credits from METEO 436(3)[1], METEO 437(3)[1] or METEO 454(3)[1]** (Sem: 5-8)

Select 6 credits from EBF 301(3); EBF 483(3), EBF 484(3); EGEE 437(3); EGEE 438(3); or EME 460(3) (Sem: 6-8)

Select 3 credits from ECON 490(3), STAT 318(3), STAT 319(3), STAT 414(3), STAT 415(3), STAT 460(3) or STAT 462(3) (Sem: 6-8)

**Preferred choice

Integrated B.S./M.S. Program in Meteorology

The Department of Meteorology offers an integrated B.S./M.S. (IUG) Program that is designed to allow academically superior students to obtain both the B.S. and the M.S. degree in Meteorology in five years of study. In order to complete the program in five years, students interested in the Integrated B.S./M.S. Program in Meteorology must apply for admission to the Graduate School and the Integrated B.S./M.S. Program by the end of their junior year.

During the first three years, the student will follow the course scheduling of one of the options in the B.S. degree, normally the Atmospheric Sciences or the General option (see the Undergraduate *Bulletin*). Students who intend to enter the Integrated B.S./M.S. program are encouraged to take upper level classes during their first three years whenever appropriate. By the end of the junior year, students normally apply for admission to both the IUG program and to the Graduate School. Acceptance decisions will be made prior to the beginning of the senior year and M.S. advising committees appointed for successful applicants. During the senior year, IUG students follow the scheduling of the selected B.S. Meteorology option, with an emphasis on completing 500-level course work as appropriate. During the senior year, IUG students will start work on their theses or papers that are designed to meet the requirements of the M.S. degree in Meteorology. During the fifth year, IUG students take courses fulfilling the departmental M.S. degree requirements and complete their M.S. theses or papers. Typical scheduling plans for students pursuing the General or Atmospheric Sciences options are given on the departmental Web site <http://www.met.psu.edu>. Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student receives financial support, for example, via an assistantship requiring the payment of graduate tuition.

Admission Requirements

Students who wish to complete the Integrated B.S./M.S. Program in Meteorology should apply for admission to both the Graduate School and the Integrated B.S./M.S. Program by no later than the end of their junior year. In this case, successful students will be admitted formally into the graduate program in Meteorology just prior to their senior year, if their progress has been satisfactory. Admission prior to the senior year is also possible in some unusual circumstances. In all cases, admission to the program will be at the discretion of the Graduate Admissions Officer for the Department of Meteorology, who will determine the necessary criteria for all applicants. These criteria include the setting of the minimum required scores on the GRE and the minimum cumulative GPA for consideration, the receipt of sufficiently strong recommendation letters from three faculty and a strong letter of support from the department head, and the writing of an excellent proposal for a workable research project with a specific adviser; normally, evidence of significant research progress must be provided in the application as well.

The details of the program requirements can be found in the Graduate Degree Programs *Bulletin*.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[71] The following substitutions are allowed for students attending campuses where the indicated courses is not offered: CAS 100 GWS or ENGL 202C GWS can be substituted for EMSC 100S GWS.

Last Revised by the Department: Spring 2017

Blue Sheet Item #: 45-05-005

Review Date: 2/21/2017

UCA Revision #1: 8/9/06

Management

University Park, Smeal College of Business (MGMT)

PROFESSOR DENNIS GIOIA, Chair, Department of Management and Organization

This major provides students with knowledge and skills managers need to deal with contemporary management challenges, such as leading and motivating people of different ages and backgrounds, developing strategies for competing in the global economy, and balancing the interest of multiple stakeholders in a complex legal, political, and ethical environment. The management core provides a general overview of the knowledge and skills required for effectively managing people and organizations. Students then supplement that overview with either the Human Capital Management concentration or the Organizational Leadership concentration. Career opportunities are in management trainee positions, human capital management, customer service, consulting, and family businesses.

Human Capital Management Concentration - The HCM concentration prepares students for a professional career in human resources management, and develops skills and expertise in areas such as planning, staffing, job design, employee development, performance management, compensation, change management, and managing diversity.

Organizational Leadership Concentration - The Organizational Leadership concentration provides students with knowledge of the attributes, processes and skills associated with leading organizations in dynamic times. It emphasizes student development of capabilities in leading themselves and others, leading change, and leading strategically in a global economic and social environment.

Entrance Requirement: To be eligible for entrance into the Management (MGMT) major, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy requirements for entrance to the major.

Specific entrance requirements include:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4)[1]; ECON 102 GS(3); SCM 200 GQ(4)[1] or STAT 200 GQ(4)[1]; ENGL 15 GWS(3) or ENGL 30 GWS(3); and MATH 110 GQ(4)[1] or MATH 140 GQ(4)[1]; FIN 301(3)[1]; MGMT 301(3)[1]; and MKTG 301(3)[1]. These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu>).

For the B.S. degree in Management, a minimum of 120 credits is required (at least 15 credits must be taken at the 400 level).

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14 credits

REQUIREMENTS FOR THE MAJOR: 73 credits

(This includes 12 credits of General Education courses: 3 credits of GWS courses; 6 credits of GQ courses; 3 credits of GS courses.)

PRESCRIBED COURSES (46 credits)

ACCTG 211(4)[1], ECON 102 GS(3), FIN 301(3)[1], MGMT 301(3)[1], and MKTG 301(3)[1] (Sem: 1-4)
BA 342(3), BA 411(3), BLAW 341(3), ECON 104 GS(3), ENGL 202D GWS(3), MIS 204(3), SCM 301(3), MGMT 326(3)[1], MGMT 451(3)[1], MGMT 471(3)[1] (Sem: 5-8)

ADDITIONAL COURSES (17 credits)

MATH 110 GQ(4)[1] or MATH 140 GQ(4)[1] (Sem: 1-2)

SCM 200 GQ(4)[1] or STAT 200 GQ(4)[1] (Sem: 1-2)

Select 9 credits from one of the following two areas of concentration:

A. Human Capital Management Concentration (9 credits)

MGMT 341(3)[1] (Sem: 5-6)

Select six credits [1] from the following: MGMT 441(3), MGMT 443(3), MGMT 445 US(3) (Sem: 6-8)

B. Organizational Leadership Concentration (9 credits)

MGMT 355(3) [1] (Sem: 5-6)

Select six credits [1] from the following: MGMT 420(3), MGMT 445 US(3), MGMT 461 IL(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (10 credits)

Select 4 credits: Attainment of 12th-credit-level proficiency in a single foreign language. (4 credits) Proficiency must be demonstrated by either examination or course work (Sem: 1-4)

Select 6 credits of supporting coursework from an approved department list. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lasted Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

Dept head update: 6/9/05

BA

Microbiology

University Park, Eberly College of Science (MICRB)

PROFESSOR Meredith Rosser Defelice, *in charge*

Microbiology is the science of the "simple" forms of life and of the response of more complex life forms to their presence and activities. Students in the Microbiology major will (1) complete a comprehensive study of life processes at the molecular and cellular level, with particular emphasis on prokaryotes, and (2) perform basic and advanced techniques in laboratory methodology. Through advanced course study, the many subdisciplines of microbiology such as molecular genetics, immunology, and virology may be explored more fully. Ample opportunities exist for participation in faculty-initiated research projects. Extensive laboratory experience is a particular strength of the major. Courses in such applied areas as industrial, medical, and food microbiology help prepare students for careers in the pharmaceutical, biotechnical, and agricultural industries.

In order to be eligible for entrance to the Microbiology major, a student must have: (1) attained at least a 2.00 cumulative grade-point average and (2) completed CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), and MATH 140 GQ(4) and earned a grade of C or better in each of these courses.

For the B.S. degree in Microbiology, a minimum of 125 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 95 credits^[86]

(This includes 15 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses.)

PRESCRIBED COURSES (64 credits)

CHEM 110 GN(3)^[11], CHEM 111 GN(1)^[11], CHEM 112 GN(3)^[11], CHEM 113 GN(1), MATH 140 GQ(4)^[11], MATH 141 GQ(4), MICRB 201(3)^[85], MICRB 202(2), PSU 16(1) (Sem: 1-2)
PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 1-4)
BMB 442(3), BIOL 322(3), CHEM 210(3), CHEM 212(3), CHEM 213(2), MICRB 251(3)^[85], MICRB 252(3)^[85] (Sem: 3-4)
BMB 400(2), BMB 401(3), BMB 402(3), MICRB 421(3) (Sem: 5-6)
BMB 428(3) (Sem: 5-8)

ADDITIONAL COURSES (21-23 credits)

Select any four of the following: MICRB 401(3), MICRB 410(3), MICRB 412(3), MICRB 415(3), or MICRB 450(2) (Sem: 5-6)

Select 3-4 credits from BMB 445(2), BMB 448(2), MICRB 422(2), MICRB 447(1) (Sem: 5-8)

Select 6-7 credits from FDSC 408(2), BMB 408(1-2), BMB 488(2), BMB 496(1-18) or any other MICRB 400-level course, with a total maximum of 3 credits in BMB 408 and/or MICRB 408 and a maximum of 4 credits in BMB 488 and/or BMB 496 (1-18) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (8-10 credits)

Select 8-10 credits from department list (Sem: 5-8)

Note: A student enrolled in an ROTC program may, after consultation with the head of the microbiology program, substitute up to 6 credits of ROTC in the categories of Additional Courses and Supporting Courses and Related Areas.

^[11] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

^[85] To graduate, a grade of C or better is required in two of the following courses: MICRB 201, BMB/MICRB 251, BMB/MICRB 252.

^[86] To graduate, a grade of C or better is required in 9 credits of any BMB, or MICRB 400-level course except BMB 443, BMB 445, BMB 448, BMB 496, MICRB 421, MICRB 422, MICRB 447.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-136

Review Date: 08/23/16

UCA Revision #1: 8/9/06

SC

Management Information Systems

Penn State Erie, The Behrend College (MISBD)

The MIS Major prepares students for typical IT-related jobs such as programmer/analyst, systems analyst, data analyst, database administrator, team leader, project manager, consultant, and MIS manager. Since the focus of such jobs is on the application of information technology to business problems and opportunities, the MIS curriculum integrates three main areas of study.

In the first area, students take core business courses in order to understand organizational processes and user requirements. In the second area, students take computer science courses in order to understand information technologies and to develop technical competencies. In the third area, students take core MIS courses in the areas of database management systems, systems analysis, and systems design and development where the focus is on learning tools, processes, and techniques required for successful application of information technology to business problems. These core courses are supplemented with a variety of electives and a required, and very useful, internship experience.

BUSINESS ANALYST OPTION. The Business Analyst option focuses on educating students with principles, methods and tools related to business processes, enterprise systems, business reporting for decision-making and web technologies applications. The option provides a sharper focus for students who wish to pursue their careers emphasizing ERP, business process management, business intelligence, and web technologies.

DATA ANALYST OPTION. The Data Analyst option focuses on educating students with principles, methods and tools related to business analytics, business intelligence, data warehousing, and big data. The option provides the fundamental knowledge and skills in the area of analytics that draws on multiple areas including decision support systems, data mining, database technology, data visualization, and advances in large-scale computing. Students will gain skills needed to support data-driven decision-making for tackling business problems that often cut across conventional disciplinary boundaries and involve a blend business and information technology. The courses in this option are designed to convey key principles through projects and exercises that involve hands-on experiential learning using realistic datasets and applications. The option will provide a sharper focus for students who wish to pursue their careers emphasizing data analytics with applications in public and private sectors.

SYSTEMS ANALYST OPTION. The Systems Analyst option focuses on educating students with principles, methods and tools related to systems design, systems development, programming tools, and IT systems architecture. The option provides a sharper focus for students who wish to pursue their careers emphasizing the design and development of new information systems.

Entrance to Major Requirements:

Entry to the Management Information Systems major requires the completion of 5 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); MATH 110 GQ(4) or MATH 140 GQ(4); STAT 200 GQ(4) or SCM 200(4), and a 2.00 or higher cumulative grade-point average.

For the B.S. degree in Management Information Systems, a minimum of 120 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 credits

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 88-91 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (40 credits)

ACCTG 211(4), ECON 102 GS(3), ECON 104 GS(3) (Sem: 3-6)
MKTG 301(3) [\[1\]](#), SCM 301(3) [\[1\]](#) (Sem: 3-6)
FIN 301(3) [\[1\]](#), MGMT 301(3) [\[1\]](#), MGMT 410(3) [\[1\]](#), MGMT 471W(3) [\[1\]](#), MIS 204(3), MIS 336(3) [\[1\]](#), MIS 430(3) [\[1\]](#) (Sem: 5-6)
MIS 495(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (18 credits)

MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)
SCM 200 GQ(4) or STAT 200 GQ(4); ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 3-4)
BA 241(2) and BA 242(2) or BA 243(4) (Sem: 3-6)
Select 3 credits from ECON 470 IL(3) [\[1\]](#), ECON 473 IL(3) [\[1\]](#), FIN 471(3) [\[1\]](#), MGMT 461 IL(3) [\[1\]](#), MKTG 445 IL(3) [\[1\]](#), or other 400-level international business courses [\[1\]](#) (Sem: 7-8)

REQUIREMENTS FOR THE OPTION (31-34 credits)

BUSINESS ANALYST OPTION: 31 credits

PRESCRIBED COURSES (7 credits)

MIS 404 (3) [\[1\]](#), MIS 445 (4) [\[1\]](#)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

Select 3 credits from MIS 387 (3) [\[1\]](#) or MIS 470 (4) [\[1\]](#)
Select any combination of 6 credits from the non-business supporting course list for the major. (Sem: 1-8)
Select 3 credits in programming courses (Sem: 3-8)
Select 12 credits [\[1\]](#) from 300- or 400-level MIS, or other business supporting course areas (see school list of approved courses) (Sem: 5-8)

DATA ANALYST OPTION (31-33 credits)

PRESCRIBED COURSES (13 credits)

MIS 345(3) [\[1\]](#), MIS 445(4) [\[1\]](#), MIS 447(3) [\[1\]](#), MIS 494(3) [\[1\]](#)

SUPPORTING COURSES AND RELATED AREAS (18-20)

Select 3 credits in programming courses [\[1\]](#) (Sem: 3-8)
Select any combination of 6-7 credits from Software Engineering or Computer Science or 300- or 400-level MIS or business supporting or non-business supporting course list for the major. (Sem: 1-8)
Select any combination of 9-10 credits from Software Engineering or Computer Science or 300- or 400-level MIS, or other business supporting course areas (see school list of approved courses) (Sem: 5-8)

SYSTEMS ANALYST OPTION: 31-34 credits

PRESCRIBED COURSES (4 credits)

MIS 435 (4) [\[1\]](#)

SUPPORTING COURSES AND RELATED AREAS (27-30 credits)

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Select any combination of 6-7 credits from the non-business supporting course list for the major. (Sem: 1-8)

Select 9 credits in programming courses taken from two different languages (Sem: 3-8)

Select 6-7 credits^[1] of 300- or 400-level courses in Computer Science, or MIS in consultation with adviser (see school list of approved courses) (Sem: 5-8)

Select 6-7 credits^[1] from 300- or 400-level MIS, or other business supporting course areas (see school list of approved courses) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-05-009

Review Date: 2/23/2016

UCA Revision #1: 8/20/06

UCA Revision #2: 7/27/07

BD

Marketing

University Park, Smeal College of Business (MKTG)

PROFESSOR DUNCAN FONG, *Chair of the Department of Marketing*

This major provides professional education leading to positions in business, government, and other organizations, and helps prepare the student for advanced study at the graduate level. Career opportunities are in marketing management, sales management, advertising, marketing research, retailing, public policy, and consumer affairs. In addition to following a planned course sequence in general marketing management, the students may elect course work that focuses on their interests in consumer or business-to-business marketing, physical goods or services marketing, retail marketing and for-profit or not-for-profit marketing.

The Marketing major is designed to be integrated with the college's professional education in business and builds on that program and on education in the social sciences.

Entrance Requirement: To be eligible for entrance into the Marketing (MKTG) major, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy requirements for entrance to the major.

Specific entrance requirements include:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4)[1]; ECON 102 GS(3); SCM 200 GQ(4)[1] or STAT 200 GQ(4)[1]; ENGL 15 GWS(3) or ENGL 30 GWS(3); and MATH 110 GQ(4)[1] or MATH 140 GQ(4)[1]; FIN 301(3)[1]; MGMT 301(3)[1]; and MKTG 301(3)[1]. These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu>).

For the B.S. degree in Marketing, a minimum of 120 credits is required with at least 15 credits at the 400 level.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14 credits

REQUIREMENTS FOR THE MAJOR: 73 credits

(This includes 12 credits of General Education courses: 3 credits of GWS courses; 6 credits of GQ courses; 3 credits of GS courses.)

PRESCRIBED COURSES (46 credits)

ACCTG 211(4)[1], ECON 102 GS(3), FIN 301(3)[1], MGMT 301(3)[1], MKTG 301(3)[1] (Sem: 1-4)
BA 342(3), BA 411(3), BLAW 341(3), ECON 104 GS(3), ENGL 202D GWS(3), MIS 204(3), SCM 301(3), MKTG 330(3)[1], MKTG 342(3)[1], MKTG 450(3)[1] (Sem: 5-8)

ADDITIONAL COURSES (17 credits)

MATH 110 GQ(4)[1] or MATH 140 GQ(4)[1] (Sem: 1-2)

SCM 200 GQ(4)[1] or STAT 200 GQ(4)[1] (Sem: 1-2)

Select 9 credits [1] from MKTG 327(3), MKTG 410(3), MKTG 422(3), MKTG 426(3), MKTG 428(3), MKTG 437(3), MKTG 440(3), MKTG 443(3), MKTG 445 IL(3) (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS (10 credits)

Select 4 credits: Attainment of 12th credit level proficiency in a single foreign language. (4 credits) Proficiency must be demonstrated by either examination or course work (Sem: 1-4)

Select 6 credits of supporting course work. See Department List. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-027

Review Date: 04/09/2013

UCA Revision #1: 8/9/06

BA

Middle Level Education

University Park, College of Education (MLVED_BS)

PROFESSOR Fran Arbaugh, *in charge*

The Middle Level Education major prepares graduates to teach all subjects in grades 4-6 and English, Mathematics, or Social Studies in grades 7-8. The Middle Level Education major supports candidates' understanding of subject-specific content as well as methods of teaching appropriate for early adolescents in grades 4-8. Upon graduation, students will have met all coursework and field experience requirements for the Pennsylvania Department of Education (PDE) 4-8 English, 4-8 Mathematics, or 4-8 Social Studies Instructional I Certificate. In addition, they will have been prepared for the appropriate teacher certification exams as required by PDE for initial certification.

This program undergoes accreditation by the Council for Accreditation of Educator Preparation (CAEP) with a Specialized Professional Association (SPA) review conducted by the American Middle Level Association (AMLE).

Baccalaureate degree candidates must meet the following requirements before Entrance to Major:

1. Completion of at least 48 semester credit hours, including ENGL 015 GWS(3) or ENGL 030 GWS(3), six credits of quantification, and three credits of natural science, as well as three credits of literature for Mathematics Education 4-8 Option, three credits of literature for Social Studies 4-8 Option, or six credits of literature for English Education 4-8 Option.
2. A minimum cumulative grade point average of 3.00.
3. Satisfactory of any basic-skills or entrance testing requirements as specified by the Pennsylvania Department of Education in force at the time of Entrance to Major.
4. A grade of "C" or better in all specified courses.
5. Completion of C I 295B.
6. Completion of a core of Education courses specified by the certificate program.
7. Completion of additional credits as specified by the certification program.
8. Approval from the professional education adviser or the head of the pertinent certification program.

Candidates must maintain a minimum cumulative grade point average of 3.00. If a student's cumulative GPA drops below 3.00, a warning letter will be sent to the student, their adviser and the program head. Generally, a student is given one semester to achieve a cumulative GPA of 3.00 or higher or they will not be permitted to continue in a Teacher (Educator) Preparation Program.

For the Bachelor of Science in Middle Level Education a minimum of 125 credits is required for the English 4-8 and Mathematics 4-8 Options and 130 credits is required for the Social Studies 4-8 Option. .

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST YEAR SEMINAR:

(Included in GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-6 credit

REQUIREMENTS FOR THE MAJOR: 107-113 credits [\[1\]](#)

(This includes 27 credits of General Education courses: English 4-8 Option – 6 credits of GH courses, 9 credits of GN courses, 6 credits of GQ courses, 6 credits of GS courses. Mathematics 4-8 Option -- 6 credits of GH courses, 9 credits of GN courses, 6 credits of GQ courses, 6 credits of GS courses. Social Studies 4-8 Option – 6 credits of GH courses, 9 credits of GN courses, 6 credits of GQ courses, 6 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 76 credits

PRESCRIBED COURSES (64 credits)

C I 280 GH(3), C I 295B(3), EDPSY 014(3), EDTHP 115 US(3), HD FS 239 GS(3), MATH 200 GQ(3) (Sem: 1-4)
C I 405(3), C I 495B(3), C I 495D(12), C I 495F(3), LL ED 400(3), LL ED 401(3), LL ED 402(3), MTHED 420(3), SCIED 458(3), SPLED 400(4), SPLED 403A(3), SS ED 430 (3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits in literature (GH) from: CMLIT 101 GH;US;IL(3), CMLIT 109 GH;US;IL(3), CMLIT 110 GH;US;IL(3), CMLIT 111 GH;IL(3), ENGL 135 GH;US(3), ENGL 139 GH;US(3), ENGL 194 GH;US;IL(3), ENGL 221 GH(3), ENGL 222 GH(3), ENGL 226 GH;US;IL(3), ENGL 231 GH(3), ENGL 232 GH(3), ENGL 245 GH;US(3), (Sem: 1-4)

Select 9 credits: 3 credits each (including one course with a lab) from biological science, earth science, and physical science (GN courses) (Sem: 1-6)

REQUIREMENTS FOR THE OPTION: 30-37 credits

ENGLISH 4-8 OPTION: (31-32 credits)

PRESCRIBED COURSES (7 credits)

SOC 119 GS;US(4) (Sem: 1-4)
LL ED 450(3) (Sem: 5-8)

ADDITIONAL COURSES (6-7 credits)

Select 3-4 credits from: EDPSY 101 GQ(3); STAT 100 GQ(3); STAT 200 GQ(4) (Sem: 1-4)
Any MATH GQ course (3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 3 credits of British Literature from:
ENGL 221(3), ENGL 222(3), ENGL 440(3), ENGL 441(3), ENGL 442(3), ENGL 443(3), ENGL 444(3), ENGL 445(3), ENGL 446(3), ENGL 447(3), ENGL 448(3), ENGL 450(3), ENGL 451(3), ENGL 452(3), ENGL 453(3), ENGL 454(3), ENGL 455(3), ENGL 456(3), ENGL 457(3), or ENGL 458(3) (Sem: 1-6)

Select 3 credits of American Literature from:

ENGL 231 GH(3), ENGL 232 GH(3), ENGL 432(3), ENGL 433(3), ENGL 434(3), ENGL 435(3), ENGL 436(3), ENGL 437(3), ENGL 438(3), or ENGL 439(3) (Sem: 1-6)

Select 3 credits of Comparative Literature from:

CMLIT 101 GH;US;IL(3), CMLIT 109 GH;US;IL(3), CMLIT 110 GH;US;IL(3), CMLIT 111 GH;IL(3), CMLIT 404 IL(3), CMLIT 422 IL(3), CMLIT 423 IL(3), ENGL 135 GH;US(3), ENGL 139 GH;US(3), ENGL 194 GH;US;IL(3), ENGL 226 GH;US;IL(3), ENGL 235 US(3), ENGL 245 GH;US(3), ENGL 431 US(3), ENGL 461 US(3), ENGL 462 US(3), ENGL 463 US(3), ENGL 466 US(3), ENGL 467 US(3), ENGL 468 US(3), or ENGL 469 US(3), (Sem: 1-6)

Select 3 credits of Writing from:

ENGL 212(3), ENGL 213(3), ENGL 215(3), ENGL 281(3), ENGL 412(3), ENGL 413(3), ENGL 414(3), or ENGL 415(3) (Sem: 1-6)

Select 6 credits of Media Literacy from:

CAS 213(3), CAS 215(3), CAS 250(3), CAS 271 US;IL(3), CAS 280W(3), CAS 375(3), CAS 422 US(3), COMM 100 GS(3), COMM 120(3), COMM 150 GA(3), COMM

180 GS(3), COMM 205 GS;US(3), COMM 250 GA(3), COMM 453 IL(3), or COMM 454(3) (Sem: 1-6)

MATHEMATICS 4-8 OPTION: (31 credits)

PRESCRIBED COURSES (25 credits)

MATH 140(4), MATH 141(4), MATH 201 GQ(3), MATH 220 GQ(2) (Sem: 1-4)
MTHED 428(3), MTHED 429(3), MTHED 431(3), MTHED 433(3) (Sem: 5-7)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 3 credit humanities GH from: AF AM/WMNST 101 GH;US(3), AF AM/RL ST 145 GH;US;IL(3), AF AM/RL ST 146 GH;US(3), AF AM/HIST 210 GH;US(3), GEOG 122 GH;US(3), HIST 010 GH;IL(3), HIST 011 GH;IL(3), HIST 012 GH;US(3), HIST 021 GH;US(3), HIST 100 GH;IL(3), HIST 101 GH;IL(3), HIST 104 GH(3), HIST 107 GH;IL(3), HIST 115 GH;US(3), HIST 121 GH;IL(3), HIST 130 GH;US(3), HIST 144 GH;US;IL(3), HIST 152 GH;US;IL(3), HIST 153 GH;US(3), HIST 155 GH;US(3), HIST 156 US(3), HIST 158 US;IL(3), HIST 174 GH;IL(3), HIST 175 GH;IL(3), HIST 176 GH;IL(3), HIST 179 GH;IL(3), HIST 180 GH;IL(3), HIST 181 GH;IL(3), HIST 191 GH;IL(3), S T S/HIST 123 GH(3), WMNST/AF AM 102 GH;IL(3), WMNST/AM ST 104 GH;US(3), WMNST/HIST 117 GH;US;IL(3) (Sem: 1-4)

Select 3 credits social and behavioral sciences GS from: AF AM 100 GS;US(3), ECON 14 GS(3), ECON 102 GS(3), ECON 104 GS(3), EDTHP 200 GS(3), EDTHP 420(3), GEOG 30N GS;IL(3), GEOG 40 GS;IL(3), GEOG 123 GS;IL(3), GEOG 126 GS;US;IL(3), GEOG 130 GS(3), GEOG 160 GS(3), HIST 120 GS;IL(3), PL SC 3 GS;IL(3), PL SC 7 GS(3), PL SC 14 GS;IL(3), PL SC 17 GS(3), PL SC 110 GS;US(3), PL SC 123 GS;US;IL(3), PL SC 130 GS;US(3), PL SC 135 GS(3), S T S/PL SC 135 GS(3), SOC 119 GS;US(4) (Sem: 1-4)

SOCIAL STUDIES 4-8 OPTION: (36-37 credits)

PRESCRIBED COURSES (15 credits)

GEOG 10 GN(3), GEOG 20 GS;US;IL(3), HIST 20 GH;US(3), PL SC 1 GS(3) (Sem: 1-6)
SS ED 412W(3) (Sem: 5-8)

ADDITIONAL COURSES (6-7 credits)

Select 3-4 credits from:

EDPSY 101 GQ(3); STAT 100 GQ(3); STAT 200 GQ(4) (Sem: 1-4)

Any MATH GQ course (3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits from social sciences with at least 6 credits taken at the 100-level or above, from the selections below.

Select at least 3 credits in Economics Policy from: ECON 014 GS(3), ECON 102 GS(3), ECON 104 GS(3), GEOG 124 GS;IL(3), GEOG 126 GS;US;IL(3), HIST 155 GH;US(3), HIST 156 US(3), PL SC 135 GS(3), WMNST 456(3) (Sem: 3-8)

Select at least 6 credits in Civics and Society from: AF AM/RL ST 145 GH;US;IL(3), AF AM/ENGL 235 US(3), AF AM/SOC 409 US(3), EDTHP 200 GS(3), EDTHP 297(3), EDTHP/CI ED 401 IL(3), EDTHP 447 US(3), EDTHP/WMNST 412(3), EDTHP 420(3), EDTHP 427(3), GEOG 320 GS;US;IL(3), HIST 158 US;IL(3), PL SC 2(3), PL SC 3 GS;IL(3), PL SC 7 GS(3), PL SC 14 GS;IL(3), PL SC 17 GS(3), PL SC 110 GS;US(3), PL SC 123 GS;US;IL(3), PL SC 125(3), PL SC 130 GS;US(3), S T S/PL SC 135 GS(3), SOC 119 GS;US(4), WMNST/AM ST 104 GH;US(3), WMNST/AM ST 430 US(3), WMNST 466 US;IL(3) (Sem: 3-8)

Select at least 6 credits in Historical and Geographical Perspectives from: AF AM 100 GS;US(3), AF AM/WMNST 101 GS;US(3), AF AM/RL ST 146 GH;US(3), AF AM/HIST 210 GH;US(3), EDTHP 430(3), EDTHP 435(3), GEOG 030 GS;IL(3), GEOG 040 GS;IL(3), GEOG 110 GN(3), GEOG 115 GN(3), GEOG 122 GH;US(3), GEOG 160 GS(3), HIST 010 GH;IL(3), HIST 011 GH;IL(3), HIST 012 GH;US(3), HIST 021 GH;US(3), HIST 100 GH;IL(3), HIST 101 GH;IL(3), HIST 104 GH(3), HIST 107 GH;IL(3), HIST 115 GH;US(3), HIST 121 GH;IL(3), HIST 130 GH;US(3), HIST 144 GH;US;IL(3), HIST 152 GH;US;IL(3), HIST 153 GH;US(3), HIST 174 GH;IL(3), HIST 175 GH;IL(3), HIST 176 GH;IL(3), HIST 179 GH;IL(3), HIST 180 GH;IL(3), HIST 181 GH;IL(3), HIST 191 GH;IL(3), S T S 123 GH(3), WMNST/AF AM 102 GH;IL(3), WMNST/HIST 117 GH;US;IL(3), WMNST/GEOG 426Y US;IL(3) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-055

Review Date: 8/23/2016

R & T: 01/14/2014

ED

Mining Engineering

University Park, College of Earth and Mineral Sciences (MNG E)

PROFESSOR JEFFERY L. KOHLER, Undergraduate Program Chair

Mining contributes to nearly 15 % of the U.S. and 25% of the global economy. Mined products are significant and critical inputs to food production, manufacturing, construction, and electricity supply, and each year every person in the U.S. requires an average of 38,500 pounds of new minerals to equip and power their day-to-day activities. Over 14,000 mines distributed throughout the U.S. supply the majority of these mined products.

The Penn State Mining Engineering Program prepares students for a career in the industrial minerals, metals, and energy industries that sustain the domestic and global economies. Importantly, the Program provides an emphasis on sustainable mining through integration of environmental, safety and health, and societal responsibility principles in the design and operation of mineral enterprises.

Graduates of the program will be prepared to work domestically or internationally to develop and operate mines; or to work in supporting activities including engineering consulting, banking, equipment development and supply, regulatory enforcement, and research. This is accomplished primarily through the curriculum, but is enhanced by an internship program, which allows qualified students to obtain practical experience through structured employment opportunities in the private and public sectors.

The curriculum is built on the foundation of mathematics, science, and general education common to engineering majors at Penn State. The courses specific to this major are designed and sequenced to provide an appropriate blend of theory, application, and design. The required courses help to provide the enabling skills for graduates to work in any facet of the vast minerals industry, and technical electives allow for in-depth study of more specialized topics. The general education opportunities are sufficiently broad and diverse in nature and scope to enable the student to tailor the educational experience to particular interests, backgrounds, and expected roles in society.

The integration of knowledge and skills acquired during the course of study in the Mining Engineering program provides graduates with the following student outcomes:

1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to design and conduct experiments, as well as to analyze and interpret data
3. An ability to design a system, component, or process to meet desired needs
4. An ability to function on multi-disciplinary teams
5. An ability to identify, formulate, and solve engineering problems
6. An understanding of professional and ethical responsibility
7. An ability to communicate effectively
8. The broad education necessary to understand the impact of engineering solutions in a global and societal context
9. A recognition of the need for and an ability to engage in life-long learning
10. A knowledge of contemporary issues
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

PROGRAM EDUCATIONAL OBJECTIVES

1. Within three-to-five years after graduation, students are expected to be advancing in their career in the minerals industry and adapting to new situations and emerging problems, through the application of general engineering-science skills and the core technical problem-solving and design practices of the mining engineering profession, with an understanding of the need for lifelong learning.
2. Within three-to-five years after graduation, students are expected to be communicating effectively.
3. Within three-to-five years after graduation, students are expected to be functioning effectively as individuals or as members of teams.
4. Within the first year after graduation, students are expected to demonstrate an understanding of the importance of mining to society, and for working in a contemporary society in which safety and health, responsibility to the environment, and ethical behavior are required, without exception.
5. Within the first five years after graduation, students are expected to be preparing to attain licensure as a Professional Engineer.

STUDENT-TRAINEE PROGRAM: An internship program and a five-year work-study plan are available to incoming students in Mining Engineering.

Numerous mining and manufacturing companies, as well as government agencies, cooperate with the University to offer structured employment opportunities during the student's academic career. In addition to earning significant funds to help finance their education, these opportunities provide valuable practical and professional experience prior to graduation. The internships normally take place in the summer, and the B.S. degree can be earned in four years. The work-study plan consists of alternating six-month periods of employment and schooling, and requires five years to earn the B.S. degree. Additional information can be obtained from the department.

Integrated B.S. in Mining Engineering (MNG E) and M.S. in Energy and Mineral Engineering (EME)

The integrated undergraduate-graduate (IUG) program between the Mining Engineering undergraduate program and the Energy and Mineral Engineering graduate program enables academically superior and research-focused MNG E undergraduate students to also obtain an M.S. degree in Energy and Mineral Engineering in five years of study. Students should refer to the Energy and Mineral Engineering graduate program in the Graduate Program Bulletin for the IUG admission and degree requirements. (http://bulletins.psu.edu/bulletins/whitebook/graduate_degree_programs.cfm?letter=E&program=grad_eme.htm)

For the B.S. in Mining Engineering, a minimum of 131 credits is required. This baccalaureate program in Mining Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 113 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 6 credits of GWS courses; 3 credits of GH courses.)

PRESCRIBED COURSES (84 credits)

CHEM 110 GN(3), CHEM 111 GN(1), EMSC 100S GWS(3) [\[88\]](#) (Sem: 1-2)

ECON 102 GS(3), EDSCN 100(3) (Sem: 1-4)

MATH 140 GQ(4), MATH 141 GQ(4), MATH 250(3), STAT 301 GQ(3) (Sem: 1-6)

EMCH 210(5), GEOSC 1(3) [\[11\]](#), PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2) (Sem: 3-4)

EE 211(3), MNG 230(3) [\[11\]](#), MNG 331(3), MNG 422(3), (Sem: 3-8)

EME 460(3), MNPR 301(3) [\[11\]](#), MNPR 413(1) [\[11\]](#), MNG 404(2), (Sem: 5-6)

GEOSC 201(4), MNG 223(2), MNG 410(3), MNG 411(2), MNG 441(3) [\[11\]](#), MNG 451(4) [\[11\]](#) (Sem: 5-8)

ADDITIONAL COURSES (23 credits)

Select 23 credits, one course from each category a, b, c, d, e, f, g, or h:

- a. ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

- b. PHIL 103 GH(3) or PHIL 106 GH(3) or PHIL 107 GH(3)
or PHIL 233 GH(3)/STS 233 GH(3) (Sem: 1-4)
- c. CMPSC 201 GQ(3) or CMPSC 202 GQ(3)
- d. MATH 220 GQ(2) or MATH 231(2) (Sem: 3-4)
- e. EMCH 212(3) or EMCH 212H(3) (Sem: 3-4)
- f. EME 301(3) or ME 300(3) (Sem: 4-6)
- g. EME 303(3) or CE 360(3) (Sem: 5-6)
- h. MNG 470(3) or GEOSC 470(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in consultation with adviser (Students may apply 6 credits of ROTC.) (Sem: 5-8)

Course Substitutions for the Integrated B.S. in Mining Engineering (MNG E) and M.S. in Energy and Mineral Engineering (EME)

As many as twelve of the credits required for the master's degree may be applied to both the B.S. and M.S. degrees. A minimum of six credits counted for both the B.S. and M.S. degrees must be at the 500-level. Thesis and culminating/capstone experience credits may not be double counted. The undergraduate degree program officer will determine the specific undergraduate required courses for which the 500-level courses may be used to substitute to meet institutional and accreditation requirements.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[88] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS can be substituted for EMSC 100S GWS.

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-06-100

Review Date: 04/10/2012

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

EM

Management

Capital College (MNGMT)

JANE S. KOCHANOV, *Director of Undergraduate Studies, School of Business Administration*

This major provides students with the knowledge and skills managers need in today's dynamic business environments. Core management courses provide a general overview of key management competencies including effective leadership, team building, managing and motivating human resources, facilitating organizational change and learning, and fostering and applying organizational knowledge for competitive advantage. Students complement this general management foundation with a human resource management, entrepreneurship, or individualized concentration.

HUMAN RESOURCE MANAGEMENT CONCENTRATION: This concentration prepares students for a career in human resource management by developing skills and competencies in managing diversity and equal opportunity, ethical and fair treatment of employees, human resource planning and staffing, employee training and development, compensation and benefits, performance management, labor relations, and protecting employee safety and health. Students completing this concentration would be prepared to demonstrate their knowledge of the core principles of human resource practices and the application of those principles for potential certification as a Professional in Human Resources (PHR), Senior Professional in Human Resources (SPHR), or Global Professional in Human Resources (GPHR).

ENTREPRENEURSHIP CONCENTRATION: The Entrepreneurship concentration is designed to introduce undergraduate students to the process of new venture development. Topics covered in the concentration include business plan development, the nature of management in small business, and the role of creativity and innovation in the entrepreneurial process. Opportunities are provided for student participation in the development of an actual new business venture.

INDIVIDUALIZED CONCENTRATION: The Individualized concentration is designed to provide students with a customized specialization that enables them to develop their own concentration in a management field of their choice. It allows flexibility in developing student knowledge and competencies in accordance with their personal, professional, and career interests.

Entry to Major Requirements:

Entry to the Management major requires the completion of 8 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); FIN 301(3); MATH 110 GQ(4) or MATH 140 GQ(4); MGMT 301(3) [\[1\]](#); MKTG 301(3); SCM 200 GQ(4) or STAT 200 GQ(4); and a 2.00 or higher cumulative grade-point average. Additional information about this major is available in the office of the Director of Undergraduate Studies, School of Business Administration at Penn State Harrisburg.

For a B.S. degree in Management, a minimum of 120 credits is required. Consistent with Senate policy, at least 24 credits of course work in the major and the capstone course must be completed at the Capital College to earn the degree.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: Select 8 credits of non-business courses.

REQUIREMENTS FOR THE MAJOR: 79 credits

(This includes 12 credits of General Education Courses: 3 credits of GWS courses; 3 credits of GS courses; 6 credits of GQ courses.)

PRESCRIBED COURSES (46 credits)

ACCTG 211(4) (Sem: 1-4)

ECON 102 GS(3), FIN 301(3), MGMT 301(3) [\[1\]](#), MKTG 301(3) (Sem: 1-4)

ENGL 202D GWS(3) (Sem: 3-4)

BA 364 US:IL(3), BA 462(3) [\[1\]](#), ECON 104 GS(3), MGMT 341(3) [\[1\]](#), MGMT 433(3) [\[1\]](#), MGMT 466(3) [\[1\]](#), MIS 204(3), MIS 390(3), SCM 301(3) (Sem: 5-8)

ADDITIONAL COURSES (21 credits)

Select 4 credits from MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-4)

Select 4 credits from SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-4)

Select 4 credits from BA 243(4) or BA 241(2) and BA 242(2) (Sem: 5-6)

Select 9 credits from one of the following four areas of concentration A, B, C:

A. HUMAN RESOURCE MANAGEMENT CONCENTRATION

MGMT 440(3) [\[1\]](#), MGMT 450(3) [\[1\]](#) (Sem: 5-8)

Select 3 credits in MGMT [\[1\]](#) at the 300-400 level from department list in consultation with academic adviser (Sem: 5-8)

B. ENTREPRENEURSHIP CONCENTRATION

MGMT 431(3) [\[1\]](#), MGMT 453(3) [\[1\]](#) (Sem: 5-8)

Select 3 credits in MGMT [\[1\]](#) at the 300-400 level from department list in consultation with academic adviser (Sem: 5-8)

C. INDIVIDUALIZED CONCENTRATION

Select 9 credits in MGMT [\[1\]](#) at the 300-400 level from department list in consultation with academic adviser (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from 200-400 level business courses from: ACCTG, BA, ECON, FIN, MIS, MGMT, MKTG, or SCM in consultation with an academic adviser and in support of the student's interests. (Sem: 3-8)

Integrated B.S. in Management and M.B.A. in Business Administration

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Management candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Management and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Management and Master of Business Administration degrees. The total course load is reduced due to courses that can count towards both degrees. The first three years of the IUG program are identical to the first three years of the Bachelor of Science program. The fourth year of the IUG program differs from the fourth year of the Bachelor of Science program because of the inclusion of courses that count toward the Master of Business Administration degree requirements.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

Students have the choice of receiving the B.S. in Management degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Management degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

ADMISSION REQUIREMENTS

To initiate the application process, students must submit a resume, a personal statement including career goals and how MBA will enhance their career goals, transcripts of courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Typical students would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211(4), ECON 102(3), ENGL 15 or 30(3), FIN 301(3), MATH 110 or 140(4), MGMT 301(3), MKTG 301(3) and STAT 200(4) or SCM 200(4).

To formally apply, students must submit a completed graduate school application. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for admission into the program unless students have completed fewer than 24 credits at Penn State, in which case they must take GMAT and earn a score of at least 450. If students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

DEGREE REQUIREMENTS

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science in Management and Master of Business Administration degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. All courses counted for both degrees must be at the 500- or 800-level.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Reviewed by the Department: Fall Semester 2017

Blue Sheet Item #:46-01-070

Review Date: 8/22/2017

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

CL

Marketing

*Capital College (MRKT)
Capital College via the World Campus*

JANE S. KOCHANOV, *Director of Undergraduate Studies, School of Business Administration*

This major is designed for students interested in careers involving sales, promotion, services, distribution, research, and planning for business and the public sector. The major provides students with key concepts and methods of analysis in marketing. It focuses on understanding customer needs, developing products or services, creating and implementing marketing plans, monitoring customer responses, and projecting marketing activities for the future.

Entry to Major Requirements:

Entry to the Marketing major requires the completion of 8 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); FIN 301(3); MATH 110 GQ(4) or MATH 140 GQ(4); MGMT 301(3); MKTG 301(3) [11](#); SCM 200 GQ(4) or STAT 200 GQ(4); and a 2.00 or higher cumulative grade-point average. Additional information about this major is available in the office of the Director of Undergraduate Studies, School of Business at Penn State Harrisburg.

For the B.S. degree in Marketing, a minimum of 120 credits is required. At least 50 percent of the business credit hours required for the degree must be taken at the Capital College. No more than 60 credits should be from business and business-related courses.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: Select 8 credits of non-business courses.

REQUIREMENTS FOR THE MAJOR: 79 credits

(This includes 12 credits of General Education Courses: 3 credits of GWS courses; 3 credits of GS courses; 6 credits of GQ courses.)

PRESCRIBED COURSES (46 credits)

ACCTG 211(4) (Sem: 1-4)
ENGL 202D GWS(3), ECON 102 GS(3), FIN 301(3), MGMT 301(3), MKTG 301(3) [11](#) (Sem: 1-4)
BA 364 US:IL(3), BA 462(3), ECON 104 GS(3), MIS 204(3), MIS 390(3), SCM 301(3) (Sem: 5-8)
MKTG 330(3) [11](#), MKTG 342(3) [11](#), MKTG 450(3) [11](#) (Sem: 5-8)

ADDITIONAL COURSES (21 credits)

Select 4 credits from MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-4)
Select 4 credits from SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-4)
BA 243(4) or BA 241(2) and BA 242(2) (Sem: 5-6)
Select 9 credits [11](#) from the following: ECON 342(3), MKTG 302(3), MKTG 327(3), MKTG 422(3), MKTG 445 IL(3), MKTG 476(3), MKTG 478(3), MKTG 485(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from 200-400 level business courses from: ACCTG, BA, ECON, FIN, MIS, MGMT, MKTG, or SCM in consultation with an academic adviser and in support of the student's interests. (Sem: 3-8)

Integrated B.S. in Marketing and M.B.A. in Business Administration

The School of Business Administration offers a limited number of academically superior Bachelor of Science in Marketing candidates the opportunity to enroll in an integrated, continuous program of study leading to both the Bachelor of Science in Marketing and the Master of Business Administration. The ability to coordinate as well as concurrently pursue the two degree programs enables the students to earn both degrees in five years. Specifically, as many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. The Integrated Undergraduate-Graduate Program reduces the total number of credits needed to earn both degrees from 150 to 138.

Students in the IUG program must satisfy the requirements for both the Bachelor of Science in Marketing and Master of Business Administration degrees. The total course load is reduced due to courses that can count towards both degrees. The first two years of the IUG program are identical to the first two years of the Bachelor of Science program. Students in the IUG program take six additional credits in their third year, and six fewer credits in their fourth year. The courses that count toward the Master of Business Administration degree requirements are included in the fourth year.

Student performance will be monitored on an on-going basis. In addition, a formal evaluation of student academic performance will be performed when the students have completed 100 to 105 credits, which is at the end of the first semester of the senior year for typical students in the program. Students who have not maintained a 3.0 GPA in their graduate courses will be put on probationary status with respect to the IUG program. They will receive a warning letter regarding probationary status. Their ability to continue in the IUG program will be based on their academic performance in the last semester of their senior year.

Students have the choice of receiving the B.S. in Marketing degree at the end of the fourth year or waiting until the end of the fifth year to receive both degrees. Students who elect to receive the B.S. degree at the end of the fourth year will pay graduate tuition for courses taken in the fifth year; students opting to receive both degrees at the end of the fifth year will pay undergraduate tuition for all five years.

If for any reason students admitted to the IUG program are unable to complete the requirements for the Master of Business Administration degree, the students will be permitted to receive the Bachelor of Science in Marketing degree assuming all the undergraduate degree requirements have been satisfactorily completed. If the students successfully complete courses listed in the recommended schedule, they will satisfy the requirements for the Bachelor of Science degree by the end of their fourth year.

ADMISSION REQUIREMENTS

To initiate the application process, students must submit a resume, a personal statement including career goals and how MBA will enhance their career goals, transcripts of courses taken outside Penn State, two letters of recommendation, with at least one from the School of Business Administration faculty, and a plan of study that integrates both undergraduate and graduate requirements. A graduate faculty adviser in collaboration with the Director of MBA Program will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program.

The number of openings in the IUG program is limited. Applicants to the IUG program must have completed a minimum of 60 credits. Typical students would apply after completing between 60 and 90 credits, that is, after the fifth semester and before the end of the seventh semester. In addition, the applicants must earn a minimum of cumulative grade point average of 3.5 and complete the following Entry to Major courses or equivalent: ACCTG 211(4), ECON 102(3), ENGL 15 or 30(3), FIN 301(3), MATH 110 or 140(4), MGMT 301(3), MKTG 301(3) and STAT 200(4) or SCM 200(4).

To formally apply, students must submit a completed graduate school application. The students should mention in the notes section that the application is for the IUG program in Business Administration. The Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) is not required for

admission into the program; however, if students are interested in applying for a graduate assistantship, GMAT or GRE scores must be submitted by the end of the eighth semester.

Student applications will be evaluated based on their overall portfolio, in addition to the above requirements. In all cases, admission to the program will be at the discretion of the Graduate Admissions Committee in Business Administration.

DEGREE REQUIREMENTS

Students in the IUG program must satisfy the degree requirements for both Bachelor of Science in Marketing and Master of Business Administration degrees. The total course load is reduced due to the maximum of 12 credits that can count towards both degrees. All courses counted for both degrees must be at the 500- or 800-level.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Reviewed by the Department: Fall Semester 2017

Blue Sheet Item #:46-01-071

Review Date: 8/22/2017

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

CL

Marketing

Penn State Erie, The Behrend College (MRKTG)

The objective of the Marketing major is to provide professional education to students leading to careers in business, government, and non-profit organizations. Typically, graduates are employed in business-to-business marketing, management, sales management, retailing, marketing research, digital marketing, and brand management. The major provides a solid foundation in marketing practice, such as analyzing and understanding the needs and wants of present and potential customers, designing appropriate product offerings, establishing pricing policies, developing communication strategies, devising efficient distribution strategies, researching marketing data for the above functions, and coordinating marketing programs with other functional areas of business.

Entrance to Major Requirements:

Entry to the Marketing major requires the completion of 5 entry-to-major courses: ACCTG 211(4); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); MATH 110 GQ(4) or MATH 140 GQ(4); STAT 200 GQ(4) or SCM 200(4), and a 2.00 or higher cumulative grade-point average.

For the B.S. degree in Marketing, a minimum of 121 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 91 credits

(This includes 15 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (43 credits)

ACCTG 211(4); ECON 102 GS(3); ECON 104 GS(3); ENGL 202D GWS(3) (Sem: 3-4)

SCM 301(3)[1] (Sem:3-6)

MIS 204(3); MKTG 301(3)[1], MKTG 342(3), MKTG 343(3)[1], MKTG 344(3)[1], MKTG 441(3)[1] (Sem: 5-6)

FIN 301(3)[1], MGMT 301(3)[1], MGMT 471W(3) (Sem: 7-8)

ADDITIONAL COURSES (30 credits)

Select 4 credits from: MATH 110 GQ(4)[1] or MATH 140 GQ(4)[1] (Sem: 1-2)

Select 4 credits from: SCM 200 GQ(4)[1] or STAT 200 GQ(4)[1] (Sem: 3-4)

Select 4 credits from: BA 241(2) and BA 242(2) or BA 243(4) (Sem: 3-6)

Select 3 credits from: ECON 470 IL(3)[1], ECON 473 IL(3)[1], FIN 471(3)[1], MGMT 461 IL(3)[1],

MKTG 445 IL(3)[1], or other 400-level international business courses (Sem: 5-8)

Select 15 credits of Marketing electives from: MKTG 327(3)[1], MKTG 410(3)[1], MKTG 422(3)[1], MKTG 445 II(3)[1], MKTG 475(3)[1], MKTG 478(3)[1], MKTG 480(3)[1], MKTG 485(3)[1], MKTG 494(1-12)[1], MKTG 495(1-18)[1], or MKTG 497(1-9)[1] (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 18 credits from an approved specialization area including: any business concentration or major field and any non-business concentration or major field. Note: all credits do not need to be chosen from any one concentration area. (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring 2017

Blue Sheet Item #: 45-06-007

Review Date: 4/4/2017

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

BD

Mathematics

Altoona College (MTAAL)
University Park, Eberly College of Science (MTHBA)

PROFESSOR YUXI ZHENG, *Chair, Department of Mathematics*

Two degrees are offered in mathematics: the Bachelor of Arts and the Bachelor of Science. Both programs have a common core of mathematics courses; both programs prepare students for graduate work in mathematics. In addition, the Bachelor of Arts degree is oriented toward applications of mathematics in the arts and the humanities. The Bachelor of Science degree has a number of options. These options are oriented toward actuarial science, applied and industrial mathematics, computational mathematics, graduate study and systems analysis.

Many of the options are designed for students who want to use mathematics in industry, commerce, or government. In short, the degree requirements have the flexibility to fit many individual interests. The student, with the assistance of a faculty adviser, should select an option by the end of the sophomore year.

In order to be eligible for entrance to the Mathematics major, a student must have: 1) attained at least a 2.00 cumulative grade point average; and 2) completed MATH 140 GQ(4) and MATH 141 GQ(4) and earned a grade of C or better in each of these courses.

For the B.A. degree in Mathematics, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION or BACHELOR OF ARTS DEGREE REQUIREMENTS course selections)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 credit

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 56 credits
(This includes 6 credits of General Education GQ courses.)

PRESCRIBED COURSES (27-29 credits)
MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), MATH 220 GQ(2-3) [\[1\]](#), MATH 230(4) [\[1\]](#), MATH 311W(3-4) [\[1\]](#), MATH 312(3) [\[1\]](#), STAT 200 GQ(4) (Sem: 1-4)
MATH 403(3) [\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (18-19 credits)
CMPSC 101 GQ(3) or CMPSC 121 GQ(3) or CMPSC 201 GQ(3) (Sem: 1-2)
MATH 250(3) [\[1\]](#) or MATH 251(4) [\[1\]](#) (Sem: 3-4)
MATH 435(3) [\[1\]](#) or MATH 436(3) [\[1\]](#) (Sem: 5-8)
Select 3 credits [\[1\]](#) from MATH 411(3), MATH 412(3), MATH 417(3), MATH 419(3), or MATH 421(3) (Sem: 5-8)
Select 6 credits [\[1\]](#) of 400-level MATH courses except MATH 401(3), MATH 405(3), MATH 406(3), MATH 441(3), MATH 470(3), MATH 471(4) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (8-11 credits)
Select 8-11 credits from department list (Sem: 3-8)

Integrated B.A. in Mathematics and Master of Applied Statistics (M.A.S.)

The Integrated Undergraduate-Graduate (IUG) degree with B.A. in Mathematics and Master of Applied Statistics (M.A.S.) is designed to be completed in five years. This integrated degree will enable a select number of highly qualified and career oriented students to obtain training in statistics focused on developing data analysis skills, and exploration of core areas of applied statistics at the graduate levels in addition to an undergraduate degree in Mathematics. The M.A.S. degree is a professional masters degree that emphasizes applications. The degree prepares students with interests in mathematics, computation, and the quantitative aspects of science for careers in industry and government as statistical analysts. Research divisions in the pharmaceutical industry, quality control, and quality engineering divisions in manufacturing companies, clinical research units, corporate planning and research units, and other data intensive positions require persons with training in mathematics, computation, database management, and statistical analysis, which this program will provide.

Application Process

The number of openings in the integrated B.A. in Mathematics and M.A.S. program is limited. Admission will be based on specific criteria and the recommendation of faculty. Applicants to the integrated program:

- Must be enrolled in the Mathematics B.A. program.
- Must have completed at least 60 credits of the undergraduate degree program including the two courses: STAT 414 and STAT 415 and the students must apply to the integrated program prior to completing 110 credits.
- Must submit a transcript and a statement of purpose.
- Must present a departmental approved plan of study in the application process in consultation with the M.A.S. program director.
- Must be recommended by the chair of Mathematics Department's undergraduate program committee. Two additional recommendation letters must be sent to the M.A.S. admissions committee.
- Must submit the GRE to the M.A.S. admissions committee.
- Must apply to the M.A.S. program in Statistics.

For the IUG B.A. in Mathematics and M.A.S. degree, 120 credits are required for the B.A. and 30 credits for the M.A.S. The following twelve graduate level credits (number of credits in parentheses) can apply to both B.A. and M.A.S. degrees, six of these are at the 500 level: STAT 414(3), STAT 415(3), STAT 501(3), STAT 502(3).

Assuming all requirements for the B.A. in Mathematics are completed, students in the program can complete the B.A. degree and not advance to the M.A.S. degree if they desire.

Degree Requirements

IUG Math B.A. students must fulfill the Math B.A. requirement while counting these prescribed Statistics courses (15 credits)
STAT 220(3)*, STAT 414(3), STAT 415(3), STAT 501(3), STAT 502(3)

IUG M.A.S. Requirements (30 credits)
STAT 414(3), STAT 415(3), STAT 501(3), STAT 502(3), STAT 580(2) and STAT 581(1)**

Electives: (15 credits)
Select from STAT 464(3), STAT 503(3), STAT 504(3), STAT 505(3), STAT 506(3), STAT 507(3), STAT 509(3), STAT 510(3) and the departmental list of

additional courses for the M.A.S. program with the approval of the adviser.

For the IUG B.A. in Mathematics and M.A.S. degree, the four courses: STAT 414(3), STAT 415(3), STAT 501(3) and STAT 502(3) can apply to both the B.A. and M.A.S. degrees.

*Can be waived for students with an equivalent course, e.g. STAT 250 GQ(3) or STAT 301 GQ(3).

** For all students in the M.A.S. program, the STAT 581(1) course will have a comprehensive written project report required as part of the course, which serves as the culminating experience.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-04-097

Review Date: 01/10/2012

UCA Revision #1: 8/18/06

UCA Revision #2: 7/30/07

SC

Mathematics

Penn State Erie, The Behrend College (MTHBD)

This major builds a foundation in mathematics with emphasis on the applications of mathematics and to the development of problem-solving skills. The major has four options that share a common core of mathematics courses for the first two years. The options are Applied Mathematics, Business, Computer Science, and Pure Mathematics. They allow students to concentrate on developing mathematical skills suitable either for entry level positions in areas including applied mathematics, actuarial sciences, statistics and computer programming, or for graduate studies in mathematics and related fields. Students, with the assistance of a faculty adviser, should select an option in their sophomore year. In addition, students are strongly encouraged to participate in faculty supervised research.

Entrance to Major Requirements

In order to be eligible for entrance to the Mathematics major, a student must have: 1) attained at least a 2.00 cumulative grade point average; and 2) completed MATH 140 GQ(4) and MATH 141 GQ(4) and earned a grade of C or better in each of these courses.

For the B.S. degree in Mathematics, a minimum of 120 credits is required. A student enrolled in this major must earn at least a grade of C in each 300- and 400-level course in the major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18-24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this *bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR or in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selections)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 7-11 credits

REQUIREMENTS FOR THE MAJOR: 85-92 credits

(This includes 18-24 credits of General Education courses; 9 credits of GN courses; 6 credits of GQ courses; 0-6 credits of GS courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 49 credits

PRESCRIBED COURSES (40 credits)

CMPSC 121 GQ(3) [\[1\]](#), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#) (Sem: 1-2)

CMPSC 122 GQ(3) [\[1\]](#), MATH 311W(4) [\[1\]](#) (Sem: 3-4)

STAT 301(3) [\[1\]](#) (Sem: 3-6)

MATH 220 GQ(2) [\[1\]](#), MATH 230(4) [\[1\]](#), MATH 251(4) [\[1\]](#) (Sem: 3-8)

ENGL 202C GWS(3) (Sem: 5-6)

MATH 312(3) [\[1\]](#), STAT 401(3) [\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)

Select 1 credit of GN designated course and 8 additional credits in one of the following sequences:

a. BIOL 110 GN(4), BIOL 220W GN(4) (Sem: 1-4)

b. CHEM 110 GN(3), CHEM 111 GN(I), CHEM 112 GN(3), CHEM 113 GN(I) (Sem: 1-4)

c. PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 1-4)

d. PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 1-4)

REQUIREMENTS FOR THE OPTION: 36-43 credits [\[1\]](#)

APPLIED MATHEMATICS OPTION: (36 credits) [\[1\]](#)

ADDITIONAL COURSES (27 credits)

Select 6 credits from: CMPSC 221(3) or higher, except CMPSC 360 (Sem: 3-8)

Select 15 credits from MATH 310(3), MATH 412(3), MATH 449(3), MATH 455(3), MATH 456(3), MATH 482(3), STAT 414(3), STAT 461(3), STAT 462(3), STAT 464(3), STAT 466(3) (Sem: 5-8)

Select 6 credits from MATH 421(3), MATH 426(3), MATH 427(3), MATH 429(3), MATH 435(3), MATH 436(3), MATH 465(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from a school-approved list (Sem: 3-8)

BUSINESS OPTION: (43 credits) [\[1\]](#)

(A maximum of 30 credits through the School of Business may be used to fulfill General Education, Major Requirements and Option Requirements.)

PRESCRIBED COURSES (13 credits)

ACCTG 211(4), ECON 102 GS(3), ECON 104 GS(3) (Sem: 1-6)

MIS 204(3) (Sem: 3-6)

ADDITIONAL COURSES (24 credits)

Select 6 credits from ECON 481(3), ECON 485(3), FIN 301(3), FIN 405(3), FIN 420(3), FIN 427(3), MGMT 301(3), MGMT 331(3), MGMT 341(3), MKTG 301(3), SCM 310(3) (Sem: 3-8)

Select 6 credits from CMPSC 221(3) or higher, except CMPSC 360, and MIS 336(3) (Sem: 3-8)

Select 6 credits from MATH 482(3), MIS 336(3), MIS 430(3), MIS 435(4), MIS 445(3), STAT 414(3), STAT 461(3), STAT 462(3), STAT 464(3), STAT 466(3) (Sem: 3-8)

Select 6 credits from MATH 421(3), MATH 426(3), MATH 427(3), MATH 429(3), MATH 435(3), MATH 436(3), MATH 465(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from a school-approved list (Sem: 3-8)

COMPUTER SCIENCE OPTION: (36 credits) [\[1\]](#)

PRESCRIBED COURSES (6 credits)

CMPSC 455(3), CMPSC 465(3) (Sem: 5-8)

ADDITIONAL COURSES (18 credits)

CMPSC 221(3) or SWENG 311(3) (Sem: 3-6)

CMPSC 312(3) or CMPEN 351(3) (Sem: 3-6)

Select 12 credits from CMPSC courses at the 300- and 400-level (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from a school-approved list (Sem: 3-8)

PURE MATHEMATICS OPTION: (36 credits) [\[1\]](#)

ADDITIONAL COURSES (27 credits)

Select 18 credits from MATH 310(3), MATH 412(3), MATH 421(3), MATH 426(3), MATH 427(3), MATH 429(3), MATH 435(3), MATH 436(3), MATH 455(3), MATH 456(3), MATH 465(3), MATH 482(3), STAT 414(3), STAT 461(3), STAT 462(3), STAT 464(3), and STAT 466(3) (Sem: 3-8)
Select 9 credits from MATH 403(3), MATH 421(3), MATH 429(3), MATH 435(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from a school-approved list (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-023

Review Date: 08/20/13

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

BD

Mathematics

Altoona College (MTSAL)
University Park, Eberly College of Science (MTHBS)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR YUXI ZHENG, *Chair, Department of Mathematics*

Two degrees are offered in mathematics: the Bachelor of Arts and the Bachelor of Science. Both programs have a common core of mathematics courses; both programs prepare students for graduate work in mathematics. In addition, the Bachelor of Arts degree is oriented toward applications of mathematics in the arts and the humanities. The Bachelor of Science degree has a number of options. These options are oriented toward actuarial science, applied and industrial, computational mathematics, graduate study and systems analysis.

Many of the options are designed for students who want to use mathematics in industry, commerce, or government. In short, the degree requirements have the flexibility to fit many individual interests. The student, with the assistance of a faculty adviser, should select an option by the end of the sophomore year.

In order to be eligible for entrance to the Mathematics major, a student must have: 1) attained at least a 2.00 cumulative grade point average; and 2) completed MATH 140 GQ(4) and MATH 141 GQ(4) and earned a grade of C or better in each of these courses.

For the B.S. degree in Mathematics, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 credit

REQUIREMENTS FOR THE MAJOR: 80-83 credits
(This includes 6 General Education GQ courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 30-32 credits

PRESCRIBED COURSES (24-25 credits)
MATH 140 GQ(4)[\[1\]](#), MATH 141 GQ(4)[\[1\]](#), STAT 200 GQ(4) (Sem: 1-4)
MATH 220 GQ(2)[\[1\]](#), MATH 230(4)[\[1\]](#), MATH 311W(3-4)[\[1\]](#), MATH 312(3)[\[1\]](#) (Sem: 3-4)

ADDITIONAL COURSES (6-7 credits)
CMPSC 101 GQ(3) or CMPSC 121 GQ(3) or CMPSC 201 GQ(3)(Sem: 1-2)
MATH 250(3)[\[1\]](#) or MATH 251(4)[\[1\]](#) (Sem: 3-4)

REQUIREMENTS FOR THE OPTION: 50-51 credits

ACTUARIAL MATHEMATICS OPTION: (50-51 credits)

PRESCRIBED COURSES (30 credits)[\[1\]](#)
I E 425(3), MATH 414(3), MATH 415(3), MATH 416(3), MATH 484(3), R M 302(3), R M 410(3), R M 411(3), R M 412(3), STAT 462(3) (Sem: 5-8)

ADDITIONAL COURSES (6 credits)[\[1\]](#)
MATH 451(3) or MATH 486(3) (Sem: 5-8)
Select 3 credits from STAT 463 or 400-level MATH courses except MATH 401(3), MATH 405(3), MATH 406(3), MATH 441(3), MATH 470(3), MATH 471(4) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (14-15 credits)
Select 14-15 credits from department list (Sem: 1-8)

APPLIED AND INDUSTRIAL MATHEMATICS OPTION: (50-51 credits)

PRESCRIBED COURSES (21 credits)[\[1\]](#)
MATH 403(3), MATH 412(3), MATH 414(3), MATH 415(3), MATH 436(3), MATH 450(3), MATH 455(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)[\[1\]](#)
Select 12 credits from MATH 411(3), MATH 416(3), MATH 417(3), MATH 419(3), MATH 421(3), MATH 456(3), MATH 461(3), MATH 467(3), MATH 468(3), MATH 479(3), MATH 484(3), MATH 485(3), MATH 486(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (17-18 credits)
Select 17-18 credits from department list (Sem: 1-8)

COMPUTATIONAL MATHEMATICS OPTION: (50-51 credits)

PRESCRIBED COURSES (24 credits)
CMPSC 122(3) (Sem: 3-4)
CMPSC 465(3), MATH 414(3)[\[1\]](#), MATH 415(3)[\[1\]](#), MATH 455(3)[\[1\]](#), MATH 456(3)[\[1\]](#), MATH 467(3)[\[1\]](#), MATH 484(3)[\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)[\[1\]](#)
Select 3 credits from MATH 411(3), MATH 412(3), or MATH 417(3) (Sem: 5-8)
Select 6 credits from MATH 310(3), MATH 468(3), or MATH 485(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (17-18 credits)
Select 17-18 credits from department list (Sem: 1-8)

GENERAL MATHEMATICS OPTION: (50-51 credits)

PRESCRIBED COURSE (9 credits)[\[1\]](#)
MATH 403(3), MATH 414(3), MATH 415(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)[\[1\]](#)
MATH 435(3) or MATH 436(3) (Sem: 5-8)
Select 3 credits from MATH 411(3), MATH 412(3), MATH 417(3), MATH 419(3), or MATH 421(3) (Sem: 5-8)
Select 6 credits of 400-level MATH courses except MATH 401(3), MATH 405(3), MATH 406(3), MATH 441(3), MATH 470(3), MATH 471(4) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (29-30 credits)
Select an approved sequence of 12 credits in MATH or a related area or an area of application (Sem: 1-8)

Select 17-18 credits from department list (Sem: 1-8)

GRADUATE STUDY OPTION: (50-51 credits)

PRESCRIBED COURSES (24 credits)[\[1\]](#)

MATH 403(3), MATH 404(3), MATH 414(3), MATH 415(3), MATH 421(3), MATH 429(3), MATH 435(3), MATH 436(3) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)[\[1\]](#)

Select 9 credits of 400-level MATH courses except MATH 401(3), MATH 405(3), MATH 406(3), MATH 441(3), MATH 470(3), MATH 471(4) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (17-18 credits)

Select 17-18 credits from department list (Sem: 1-8)

SYSTEMS ANALYSIS OPTION: (50-51 credits)

PRESCRIBED COURSES (12 credits)[\[1\]](#)

MATH 414(3), MATH 415(3), MATH 436(3), MATH 484(3) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)[\[1\]](#)

Select 6 credits from MATH 310(3), MATH 451(3), MATH 485(3), or MATH 486(3) (Sem: 5-8)

Select 3 credits from 400-level MATH courses except MATH 401(3), MATH 405(3), MATH 406(3), MATH 441(3), MATH 470(3), MATH 471(4) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (29-30 credits)

Select an approved sequence of 12 credits in an area of application; possible areas include business, economics, industrial engineering, social sciences (Sem: 1-8)

Select 17-18 credits from department list (Sem: 1-8)

Integrated B.S. in Mathematics and Master of Applied Statistics (M.A.S.)

The Integrated Undergraduate-Graduate (IUG) degree with B.S. in Mathematics and Master of Applied Statistics (M.A.S.) is designed to be completed in five years. This integrated degree will enable a select number of highly qualified and career oriented students to obtain training in statistics focused on developing data analysis skills, and exploration of core areas of applied statistics at the graduate levels in addition to an undergraduate degree in Mathematics. The M.A.S. degree is a professional masters degree that emphasizes applications. The degree prepares students with interests in mathematics, computation, and the quantitative aspects of science for careers in industry and government as statistical analysts. Research divisions in the pharmaceutical industry, quality control, and quality engineering divisions in manufacturing companies, clinical research units, corporate planning and research units, and other data intensive positions require persons with training in mathematics, computation, database management, and statistical analysis, which this program will provide.

Application Process

The number of openings in the integrated B.S. in Mathematics and M.A.S. program is limited. Admission will be based on specific criteria and the recommendation of faculty. Applicants to the integrated program:

- Must be enrolled in the Mathematics B.S. program.
- Must have completed at least 60 credits of the undergraduate degree program including the two courses: STAT 414 and STAT 415 and the students must apply to the integrated program prior to completing 110 credits.
- Must submit a transcript and a statement of purpose.
- Must present a departmental approved plan of study in the application process in consultation with the M.A.S. program director.
- Must be recommended by the chair of Mathematics Department's undergraduate program committee. Two additional recommendation letters must be sent to the M.A.S. admissions committee.
- Must submit the GRE to the M.A.S. admissions committee.
- Must apply to the M.A.S. program in Statistics.

For the IUG B.S. in Mathematics and M.A.S. degree, 120 credits are required for the B.S. and 30 credits for the M.A.S. The following twelve graduate level credits (number of credits in parentheses) can apply to both B.S. and M.A.S. degrees, six of these are at the 500 level: STAT 414(3), STAT 415(3), STAT 501(3), STAT 502(3).

Assuming all requirements for the B.S. in Mathematics are completed, students in the program can complete the B.S. degree and not advance to the M.A.S. degree if they desire.

Degree Requirements

IUG Math B.S. students must fulfill the Math B.S. requirement while counting these prescribed Statistics courses (15 credits) STAT 220(3)*, STAT 414(3), STAT 415(3), STAT 501(3), STAT 502(3)

IUG M.A.S. Requirements (30 credits)

STAT 414(3), STAT 415(3), STAT 501(3), STAT 502(3), STAT 580(2) and STAT 581(1)**

Electives: (15 credits)

Select from STAT 464(3), STAT 503(3), STAT 504(3), STAT 505(3), STAT 506(3), STAT 507(3), STAT 509(3), STAT 510(3) and the departmental list of additional courses for the M.A.S. program with the approval of the adviser.

For the IUG B.S. in Mathematics and M.A.S. degree, the four courses: STAT 414(3), STAT 415(3), STAT 501(3) and STAT 502(3) can apply to both the B.S. and M.A.S. degrees.

Integrated B.S. in Mathematics/M.Ed. in Curriculum and Instruction

The Mathematics and Curriculum and Instruction with emphasis in Mathematics Education Integrated Undergraduate-Graduate (MATH/CI-MTHED IUG) leading to teacher certification in Mathematics Grades 7-12.

The Mathematics and Curriculum Instruction with Emphasis in Mathematics Education Integrated Undergraduate-Graduate (MATH/CI-MTHED IUG) Degree Program consists of the integration of required courses for a B.S. in Mathematics Systems Analysis Option, a M.Ed. in Curriculum and Instruction with emphasis in Mathematics Education (MTHED), and Pennsylvania certification for Mathematics Grades 7-12.

The MATH/CI-MTHED IUG is a five-year program for highly qualified students seeking to teach mathematics at the secondary level. A hallmark of the program is its strong statistics strand in addition to its mathematics core. In addition to developing advanced understanding of mathematics and statistics, students will learn how to develop and implement lessons and to incorporate technology and research in instruction designed to reach all students.

Students are expected to complete courses required for the certification program integrated with their undergraduate and graduate experiences and will likely complete one summer in residence. Completion of the IUG (along with earning a passing score on the Pennsylvania Department of Education required PRAXIS test) leads to a B.S. in Mathematics, certification in Mathematics Grades 7-12, and a M.Ed. in Curriculum and Instruction.

Admission to the MATH/CI-MTHED IUG Mathematics Grades 7-12 program will be based upon having attained a minimum GPA of 3.5 after completing at least 60 credits of the program, with a grade of C or better in all courses. Admission will be based on a recommendation by the Mathematics Department in consultation with the Mathematics Education faculty in the Department of Curriculum and Instruction.

For the B.S./M.Ed. Degree in integrated Mathematics B.S. and Curriculum and Instruction M.Ed., 129 credits are required for the B.S. degree, 30 credits are required for the M.Ed., and 41 credits are required for field experiences and additional courses required for secondary mathematics certification in Pennsylvania. The following courses can be used in both the B.S. and the M.Ed. degrees: MATH 400-level electives, STAT 501, STAT 502. Students can complete the B.S. in Mathematics and not advance to the M.Ed. Curriculum and Instruction degree if they desire.

Master of Education

CURRICULUM AND INSTRUCTION M.Ed. (31 credits)
(IUG in Mathematics/Curriculum and Instruction)

Core Areas (9 credits - choose one course from each area): ?Curriculum: C I 550 or equivalent;

Research: STAT 500 or equivalent; ?Learning: EDPSY 421 or equivalent

Emphasis in Mathematics Education (* denotes required courses)? includes *C I 590; *STAT 501; MATH 485, MATH 486, or MATH/CMPSC 451; *MTHED 511 or equivalent; *MTHED 520; at least one additional 400-level MATH course other than 401, 405, 406, 441, 470, or 471; at least one additional 400- or 500-level MTHED course.

Note: A Master's paper is required for completion of the M.Ed.

A passing score on the PRAXIS Mathematics Content Exam is required for Mathematics Grades 7-12 certification.

*Can be waived for students with an equivalent course, e.g. STAT 250 GQ(3) or STAT 301 GQ(3).

** For all students in the M.A.S. program, the STAT 581(1) course will have a comprehensive written project report required as part of the course, which serves as the culminating experience.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-135

Review Date: 08/23/2016

UCA Revision #1: 8/16/06

UCA Revision #2: 7/30/07

SC

Music Education

University Park, College of Arts and Architecture (MU ED)

PROFESSOR R.J. DAVID FREGO, *Director, School of Music*

The Bachelor of Music Education (B.M.E.) degree is a professional program that helps prepare students for teaching in elementary and secondary schools. Students are expected to meet all requirements for Entrance to Teacher Certification Program in Music, must pass the piano proficiency, complete all music courses, SPLED 400 and SPLED 403A or 403B, prior to student teaching. Graduates of this program are prepared to receive the Pennsylvania Instructional I certificate for teaching music K-12. (See also Teacher Education Programs.)

The goal of the Penn State Music Teacher Education Program is to prepare exemplary music teachers for K-12 music programs. Such individuals can provide outstanding personal and musical models for children and youth and have a firm foundation in pedagogy on which to build music teaching skills. Penn State B.M.E. graduates exhibit excellence in music teaching as personal and musical models as well as emerging pedagogues.

All candidates seeking entrance to the Bachelor of Music Education (B.M.E.) must meet the following entrance to major criteria:

1. Minimum 3.00 cumulative GPA by the end of the semester prior to ETM semester and at least 48 credits completed by the end of the semester prior to ETM semester.
2. Either qualifying scores from the PECT PAPA for Reading, Writing and Mathematics; qualifying Scholastic Achievement Test scores for the combined and individual Critical Reading, Writing, and Mathematics sections; or qualifying American College Test Plus Writing composite and individual English/Writing score and Math score as specified by the Pennsylvania Department of Education.
3. Complete 6 credits in quantification (GQ) ("C" or higher required).
4. Complete 3 credits in literature (GH) ("C" or higher required).
See <http://www.ed.psu.edu/currentstudents/undergraduate/certification/literature>
5. Complete ENGL 15 or ENGL 30 ("C" or higher required).
6. Complete early field experience ("C" or higher required).
Course List: MUSIC 295A
7. Complete EDPSY 10 and 3 additional credits of the education core ("C" or higher required).
Course List: EDPSY 10, PSYCH 100, HDFS 229, HDFS 239
8. Complete 15 credits of required courses in teaching area ("C" or higher required).
Course List: MUSIC 112, 151, 153, 154, 162, 216, 222, 261, 262, 331.
9. Complete primary level IV on applied instrument ("C" or higher required)
10. Complete and document a minimum of 80 hours of paid or volunteer work with age-appropriate population. At least 40 hours of these age-appropriate 80 hours would be satisfied by working with "under-represented learners."
11. Complete additional requirements: Voice Requirement (MUSIC 116 or VOICE 270), Piano Requirement (MUSIC 270 or KEYBD 270), and Percussion Requirement (MUSIC 152 or PERCN 270) ("C" or higher required).
12. Approval from the professional education adviser or the head of the pertinent certification program.

For the B.M.E., a minimum of 139 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(10-12 of these credits are included in the REQUIREMENTS FOR THE MAJOR. 18 of these credits are required for Entrance to Teacher Certification. See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 104-106 credits^[1]

(This includes 10-12 credits of General Education - 6 credits of GS, 1-3 credits of GA, and 3 credits of GH)

PRESCRIBED COURSES (49 credits)

MUSIC 40(1), MUSIC 121(1), MUSIC 122(1), MUSIC 131(2), MUSIC 132(2), MUSIC 162 IL(2) (Sem: 1-6)
MUSIC 112(.5), MUSIC 151(1), MUSIC 153(1), MUSIC 154(1), MUSIC 216(.5), MUSIC 221(1), MUSIC 222(1), MUSIC 231(2), MUSIC 261 IL(3), MUSIC 262 IL(3),
MUSIC 266(1), MUSIC 295A(1), MUSIC 331(2), MUSIC 366(1) (Sem: 3-4)
CI 280 GH(3), EDPSY 10 GS(3), MUSIC 332(2), MUSIC 340(2), MUSIC 341(2), MUSIC 345(2), MUSIC 395A(1), MUSIC 395B(1), SPLED 400(4) (Sem: 5-6)
MUSIC 101(1) (Sem: 7)

ADDITIONAL COURSES (45-47 credits)

Select 1-3 credits from INART 258A GA(3) or INART 258B GA(1) (Sem: 1-2)
Select 7 credits of ensembles as follows: MUSIC 76(1), MUSIC 77 GA(1), MUSIC 78 GA(1), MUSIC 80 GA(1), MUSIC 81 GA(1), MUSIC 82 GA(1), MUSIC 84 GA(1),
MUSIC 86 GA(1), MUSIC 87 GA(1), MUSIC 89 GA(1), MUSIC 90 GA(1), MUSIC 91 GA(1), MUSIC 92 GA(1), MUSIC 93 GA;US;IL(1), MUSIC 94 GA(1), MUSIC 103
GA(1), MUSIC 104 GA(1), MUSIC 190 GA(1), MUSIC 191 GA (1), MUSIC 192 GA(1), MUSIC 193(1), MUSIC 194(1) (Sem: 1-7)
Select 14 credits in applied music through Primary Level VII (Sem: 1-7)
Select 3 credits from HDFS 229 GS(3), HDFS 239 GS(3) or PSYCH 100 GS(3) (Sem: 1-4)
Select 3 credits from SPLED 403A(3) or SPLED 403B(3) (Sem: 6-7)
Select 2 credits from MUSIC 181(2), MUSIC 267(2) (Sem: 5-6)
Select 3 credits from MUSIC 441(3), MUSIC 444(3), MUSIC 445(3), MUSIC 446(3) (Sem: 7)
Select 12 credits from MUSIC 495A, MUSIC 495B, MUSIC 495C, as follows:
- 5 or 7 credits of MUSIC 495A (Sem: 8)
- 5 or 7 credits of MUSIC 495B or MUSIC 495C (Sem: 8)

SUPPORTING COURSES AND RELATED AREAS (10 credits)

Select 10 credits for the Individualized Emphasis, an individualized cluster of courses approved in advance by the Music Education Faculty, from an approved department list.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-05-012

Review Date: 02/25/2014

Musical Arts

University Park, College of Arts and Architecture (MUBMA)

PROFESSOR R.J. DAVID FREGO, *Director, School of Music*

The Bachelor of Musical Arts degree is a multidisciplinary or interdisciplinary program that is intended to prepare students for careers in performance, while developing a secondary area of emphasis outside of music, as determined for each student on the basis of an advising process. Completion of this program requires that the student achieve a high level of competence in order to begin professional work or pursue further studies at the graduate level.

Entrance into this program will be determined by departmental evaluation. All students are required to pass a piano proficiency examination.

For the Bachelor of Musical Arts, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(1-15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES :

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 credits

REQUIREMENTS FOR THE MAJOR: 88-90 credits^[1]

(This includes 1-15 credits of General Education courses: 1-3 credits of GA; 0-12 credits in the area of SUPPORTING COURSES AND RELATED AREAS)

PRESCRIBED COURSES (27 credits)

MUSIC 121(1), MUSIC 122(1), MUSIC 129S(3), MUSIC 131(2), MUSIC 132(2), MUSIC 162 IL(2) (Sem: 1-2)
MUSIC 221(1), MUSIC 222(1), MUSIC 231(2), MUSIC 261 IL(3), MUSIC 262 IL(3), MUSIC 266(1) (Sem: 3-4)
MUSIC 331(2), MUSIC 332(2) (Sem: 5-6)
MUSIC 101(1) (Sem: 7-8)

ADDITIONAL COURSES (4-6 credits)

INART 258A GA(3) or INART 258B GA(1) (Sem: 3-6)

Select 3 credits from MUSIC 461(3), MUSIC 462(3), MUSIC 463(3), or MUSIC 464(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (57 credits)

Select 21 credits in applied music through Level VIII of performance (Sem: 1-8)

Select 8 credits of approved ensembles (see School of Music Handbook for list of ensembles) (Sem: 1-8)

Select 4 credits in music in consultation with an adviser (Sem: 1-8)

Select 24 credits in consultation with adviser in an area of study other than music, at least 12 credits must be at the 400 level.

This list of courses must be approved by the College of Arts and Architecture's Dean of Undergraduate Studies.

(0-12 of these 24 credits may be included in GENERAL EDUCATION) (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2010

Blue Sheet Item #: 39-01-017

Review Date: 8/24/2010

Director name last updated: 01/13/06

AA

Music

University Park, College of Arts and Architecture (MUSBA)

PROFESSOR R.J. DAVID FREGO, *Director, School of Music*

The Bachelor of Arts degree in Music combines a broad liberal education with a selection of courses in Music. The degree is designed to develop basic musicianship, the ability to perform, and a set of principles that leads to a fuller intellectual grasp of the art.

The B.A. in Music degree program includes a General Music Studies Option and an additional option in Music Technology.

Students are required to pass a piano proficiency examination, enroll in a core ensemble for two semesters, and satisfactorily complete a senior project. Application for admittance into the program requires completion of a two-year core of music and General Education courses.

For the B.A. degree in Music, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(1-21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES :

(Included in the REQUIREMENTS FOR THE MAJOR, ELECTIVE, or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 credit

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 51-74 credits [\[1\]](#)

(This includes 1-21 credits of General Education courses - General Music Studies Option: 1-3 credits of GA courses; Music Technology Option: 6 credits of GA courses, 6 credits of GQ courses, 9 credits of GN courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 38 credits

PRESCRIBED COURSES (28 credits)

MUSIC 119(2), MUSIC 121(1), MUSIC 122(1), MUSIC 131(2), MUSIC 132(2), MUSIC 162 IL(2) (Sem: 1-2)

MUSIC 221(1), MUSIC 222(1), MUSIC 231(2), MUSIC 261 GA;IL(3), MUSIC 262 GA;IL(3), MUSIC 331(2) (Sem: 3-4)

MUSIC 332(2) (Sem: 5-6)

MUSIC 101(1), MUSIC 476(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (10 credits)

Select 6 credits in applied music through Level IV of Primary (Sem: 1-8)

Select 4 credits of ensembles (see School of Music Handbook for list of ensembles) (Sem: 1-8)

REQUIREMENTS FOR THE OPTION: 13-36 credits

GENERAL MUSIC STUDIES OPTION: (13-15 credits)

ADDITIONAL COURSES (1-3 credits)

INART 258A GA(3) or INART 258B GA(1) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits of 400-level music courses (see School of Music Handbook for specific requirements) (Sem: 5-8)

MUSIC TECHNOLOGY OPTION (34-36 credits)

PRESCRIBED COURSES (28 credits)

INART 258A GA(3), INART 50 GN(3), MATH 140 GQ(4), MATH 220 GQ(2), MUSIC 434 GA(3) (Sem: 1-6)

MUSIC 453(1) (Sem: 3-4)

MUSIC 452(3), MUSIC 458(3), THEA 484(3) (Sem: 5-6)

MUSIC 451(3) (Sem: 7-8)

ADDITIONAL COURSES (6-8 credits)

PHYS 250 GN(4) or PHYS 211 GN(3), PHYS 251 GN(4) or PHYS 212 GN(3) (Sem: 1-2)

Integrated B.A. in Music - M.A. in Music Theory

The School of Music offers a limited number of academically superior students enrolled in the Bachelor of Arts in Music the opportunity to enroll in an integrated program leading to both the B.A. in Music and the Master of Arts in Music Theory in a continuous program of study culminating in both degrees. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to achieve greater depth and comprehensiveness than if the degrees are pursued sequentially and to earn the two degrees in five years. In particular, the program encourages the student to integrate the undergraduate thesis with the master's thesis thereby achieving a greater depth of inquiry.

Application Process

To initiate the application process, students must submit a transcript, faculty recommendation, writing sample, and statement of goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the IUG program. Normally a student would apply after the fourth semester and before the end of the sixth semester. For acceptance into the program students must successfully complete the following courses or their equivalent with a minimum average of 3.5 in their music courses, and a minimum GPA of 3.0.

4 semesters of music theory (MUSIC 131, MUSIC 132, MUSIC 231, MUSIC 331)

4 semesters of musicianship (MUSIC 121, MUSIC 122, MUSIC 221, MUSIC 222)

3 semesters of music history (MUSIC 162, MUSIC 261, MUSIC 262)

Reduced Course Load

As many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. A minimum of 50% of the courses proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted.

B.A. Senior Project (Music 476) / M.A. Thesis (Music 600)

Students will be encouraged to select a B.A. Senior Project topic (Music 476) that will later develop into the M.A. Thesis. It is expected that the Master's Thesis consist of greater depth and specialization than the Senior Project.

Eligibility for a Graduate Assistantship

Students in the IUG program will be eligible for a graduate assistantship starting in the beginning of the fifth year.

Tuition Charges

Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student received financial support, for example, an assistantship requiring the payment of graduate tuition (from "Information and Guidelines for Establishing Integrated Undergraduate-Graduate Degree Programs" - approved by the Graduate Council, May 8, 1996).

Integrated B.A. in Music - M.A. in Music Theory and History

The School of Music offers a limited number of academically superior students enrolled in the Bachelor of Arts in Music the opportunity to enroll in an integrated program leading to both the B. A. in Music and the Master of Arts in Music Theory and History in a continuous program of study culminating in both degrees. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to achieve greater depth and comprehensiveness than if the degrees are pursued sequentially and to earn the two degrees in five years. In particular, the program encourages the student to integrate the undergraduate thesis with the master's thesis thereby achieving a greater depth of inquiry.

Application Process

To initiate the application process, students must submit a transcript, faculty recommendation, writing sample, and statement of goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the IUG program. Normally a student would apply after the fourth semester and before the end of the sixth semester. For acceptance into the program students must successfully complete the following courses or their equivalent with a minimum average of 3.5 in their music courses, and a minimum GPA of 3.0.

4 semesters of music theory (MUSIC 131, MUSIC 132, MUSIC 231, MUSIC 331)

4 semesters of musicianship (MUSIC 121, MUSIC 122, MUSIC 221, MUSIC 222)

3 semesters of music history (MUSIC 162, MUSIC 261, MUSIC 262)

Reduced Course Load

As many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. A minimum of 50% of the courses proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted.

B.A. Senior Project (Music 476) / M.A. Thesis (Music 600)

Students will be encouraged to select a B.A. Senior Project topic (Music 476) that will later develop into the M.A. Thesis. It is expected that the Master's Thesis consist of greater depth and specialization than the Senior Project.

Eligibility for a Graduate Assistantship

Students in the IUG program will be eligible for a graduate assistantship starting in the beginning of the fifth year.

Tuition Charges

Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student received financial support, for example, an assistantship requiring the payment of graduate tuition (from "Information and Guidelines for Establishing Integrated Undergraduate-Graduate Degree Programs" - approved by the Graduate Council, May 8, 1996).

Integrated B.A. in Music - M.A. in Musicology

The School of Music offers a limited number of academically superior students enrolled in the Bachelor of Arts in Music the opportunity to enroll in an integrated program leading to both the B.A. in Music and the Master of Arts in Musicology in a continuous program of study culminating in both degrees. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to achieve greater depth and comprehensiveness than if the degrees are pursued sequentially and to earn the two degrees in five years. In particular, the program encourages the student to integrate the undergraduate thesis with the master's thesis thereby achieving a greater depth of inquiry.

Application Process

To initiate the application process, students must submit a transcript, faculty recommendation, writing sample, and statement of goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the IUG program. Normally a student would apply after the fourth semester and before the end of the sixth semester. For acceptance into the program students must successfully complete the following courses or their equivalent with a minimum average of 3.5 in their music courses, and a minimum GPA of 3.0.

4 semesters of music theory (MUSIC 131, MUSIC 132, MUSIC 231, MUSIC 331)

4 semesters of musicianship (MUSIC 121, MUSIC 122, MUSIC 221, MUSIC 222)

3 semesters of music history (MUSIC 162, MUSIC 261, MUSIC 262)

Reduced Course Load

As many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. A minimum of 50% of the courses proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted.

B.A. Senior Project (Music 476) / M.A. Thesis (Music 600)

Students will be encouraged to select a B.A. Senior Project topic (Music 476) that will later develop into the M.A. Thesis. It is expected that the Master's Thesis consist of greater depth and specialization than the Senior Project.

Tuition Charges

Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student received financial support, for example, an assistantship requiring the payment of graduate tuition (from "Information and Guidelines for Establishing Integrated Undergraduate-Graduate Degree Programs" - approved by the Graduate Council, May 8, 1996).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013(MUSBA); Fall Semester 2002 (Integrated Programs)

Blue Sheet Item #: 42-03-003 (MUSBA); 30-07-036, 30-07-038, 30-07-040 (Integrated Programs)

Review Date: 11/19/2013

Director name last updated: 01/13/06

AA

Music

University Park, College of Arts and Architecture (MUSBM)

PROFESSOR R.J. DAVID FREGO, *Director, School of Music*

The Bachelor of Music degree program is intended to prepare students for careers in composition or performance. Completion of this program requires that the student achieve a high level of competence in order to begin professional work or pursue further studies at the graduate level.

Entrance into this program will be determined by departmental evaluation.

For the B.M. degree in Music with an option in Composition, a minimum of 123 credits is required; with an option in Keyboard Instruments, a minimum of 126 credits is required; with an option in Strings, Winds, Brass and Percussion Instruments, a minimum of 125 credits is required; and with an option in Voice, a minimum of 129 credits is required. All students are required to pass a piano proficiency examination.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(1-3 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 79-88 credits

(This includes 3 credits of General Education GA courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 34 credits^[1]

PRESCRIBED COURSES (24 credits)

MUSIC 121(1), MUSIC 122(1), MUSIC 131(2), MUSIC 132(2), MUSIC 162 IL(2) (Sem: 1-2)
MUSIC 221(1), MUSIC 222(1), MUSIC 231(2), MUSIC 261 IL(3), MUSIC 262 IL(3), MUSIC 266(1) (Sem: 3-4)
MUSIC 331(2), MUSIC 332(2) (Sem: 5-6)
MUSIC 101(1) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

Select 6 credits from MUSIC 461(3), MUSIC 462(3), MUSIC 463(3), MUSIC 464(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (4 credits)

Select 4 credits of approved ensembles (see School of Music Handbook for list of ensembles) (Sem: 1-8)

REQUIREMENTS FOR THE OPTION: 47-56 credits

COMPOSITION OPTION: (47-49 credits)

PRESCRIBED COURSES (34-36 credits)^[1]

INART 258A GA(3), MUSIC 173(2), MUSIC 174(2) (Sem: 1-2)
MUSIC 273(2), MUSIC 274(2) (Sem: 3-4)
MUSIC 336(2), MUSIC 373(3), MUSIC 374(3), MUSIC 458(3), MUSIC 472(2) (Sem: 5-6)
MUSIC 431(2-3), MUSIC 433(2-3), MUSIC 473(3), MUSIC 474(3) (Sem: 7-8)

ADDITIONAL COURSES (13 credits)^[1]

Select 11 credits of Applied MUSIC courses (Sem: 1-7)

Select 2 credits of approved ensembles (see School of Music Handbook for list of ensembles) (Sem: 1-8)

KEYBOARD INSTRUMENTS OPTION: (48-53 credits)

PRESCRIBED COURSES (6 credits)^[1]

MUSIC 129S(3) (Sem: 1)
MUSIC 481(3) (Sem: 5-7)

ADDITIONAL COURSES (3-6 credits)^[1]

INART 258A GA(3) or 258B GA(1) (Sem: 3-6)
Select 2-3 credits from MUSIC 181(2), MUSIC 182(2), MUSIC 267(2), MUSIC 336(2), MUSIC 422(3), MUSIC 431(2-3), MUSIC 432(2-3), MUSIC 433(2-3), MUSIC 438(2), MUSIC 472(2) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (39-41 credits)^[1]

Select 4 credits in a secondary instrument (Sem: 1-8)

Select 4 credits in music in consultation with adviser (Students may apply 2 credits of ROTC.) (Sem: 1-8)

Select 4-6 credits in consultation with adviser (Students may apply 4 credits of ROTC.) (Sem: 1-8)

Select 21 credits in applied music through Level VIII of performance (Sem: 2-8)

Select 4 credits of approved ensembles (see School of Music Handbook for list of ensembles) (Sem: 5-8)

Select 2 credits from MUSIC 419(2) or MUSIC 424(2) (Sem: 5-8)

STRINGS, WINDS, BRASS AND PERCUSSION INSTRUMENTS OPTION: (47-52 credits)

PRESCRIBED COURSES (3 credits)^[1]

MUSIC 129S(3) (Sem: 1)

ADDITIONAL COURSES (9-12 credits)^[1]

(MUSIC 336 and MUSIC 422 may fulfill the requirement of Additional Courses or Supporting Courses and Related Areas in the option, but not both.)

Select 2 credits from MUSIC 86(1), MUSIC 87(1), MUSIC 181(2), MUSIC 190(1), MUSIC 191(1), MUSIC 192(1), MUSIC 336(2), MUSIC 366(2), MUSIC 421(1), MUSIC 422(3), MUSIC 466(2), MUSIC 485(3), MUSIC 487(3) (Sem: 1-8)

INART 258A GA(3) or INART 258B GA(1) (Sem: 1-8)

Select 2-3 credits from MUSIC 181(2), MUSIC 182(2), MUSIC 267(2), MUSIC 336(2), MUSIC 422(3), MUSIC 431(2-3), MUSIC 432(2-3), MUSIC 433(2-3), MUSIC 438(2), MUSIC 472(2) (Sem: 5-8)

Select 1 credit from MUSIC 414(1-2), MUSIC 415(1-2), MUSIC 416(1-2), or MUSIC 417(1-2) (Sem: 5-8)

Select 3 credits from MUSIC 485(3) or MUSIC 487(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (35-37 credits)^[1]

Select 4 credits in a secondary instrument (Sem: 1-8)

Select 4 credits in music in consultation with adviser (Students may apply 4 credits of ROTC.) (Sem: 1-8)

Select 2-4 credits in consultation with adviser (Students may apply 2 credits of ROTC.) (Sem: 1-8)

Select 21 credits in applied music through Level VIII of performance (Sem: 2-8)

Select 4 credits of approved ensembles (see School of Music Handbook for list of ensembles) (Sem: 5-8)

VOICE OPTION: (51-56 credits)

PRESCRIBED COURSES (8 credits) [\[1\]](#)

MUSIC 129S(3) (Sem: 1)

MUSIC 387(1), MUSIC 388(1), MUSIC 389(1) (Sem: 1-8)

MUSIC 418(2) (Sem: 7)

ADDITIONAL COURSES (3-6 credits) [\[1\]](#)

INART 258A GA(3) or 258B GA(1) (Sem: 3-6)

Select 2-3 credits from MUSIC 181(2), MUSIC 182(2), MUSIC 267(2), MUSIC 336(2), MUSIC 422(3), MUSIC 431(2-3), MUSIC 432(2-3), MUSIC 433(2-3), MUSIC 438(2), or MUSIC 472(2) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (40-42 credits) [\[1\]](#)

Select 3-5 credits in consultation with adviser (Students may apply 2 credits of ROTC.) (Sem: 1-8)

Select 8 credits in one foreign language: French, German or Italian (Sem: 1-8)

Select 4 credits in a secondary instrument (Sem: 1-8)

Select 21 credits in applied music through Level VIII of performance (Sem: 2-8)

Select 4 credits of approved ensembles (see School of Music Handbook for list of ensembles) (Sem: 5-8)

Integrated B.M. in Performance - M.A. in Music Theory

The School of Music offers a limited number of academically superior students enrolled in the Bachelor of Music the opportunity to enroll in an integrated program leading to both the B.M. in Performance and the Master of Arts in Theory in a continuous program of study culminating in both degrees. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to achieve greater depth and comprehensiveness than if the degrees are pursued sequentially and to earn the two degrees in five years.

Application Process

To initiate the application process, students must submit a transcript, faculty recommendation, writing sample, and statement of goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the IUG program. Normally a student would apply after the fourth semester and before the end of the sixth semester. For acceptance into the program students must successfully complete the following courses or their equivalent with a minimum average of 3.5 in their music courses, and a minimum GPA of 3.0.

4 semesters of music theory (MUSIC 131, MUSIC 132, MUSIC 231, MUSIC 331)

4 semesters of musicianship (MUSIC 121, MUSIC 122, MUSIC 221, MUSIC 222)

3 semesters of music history (MUSIC 162, MUSIC 261, MUSIC 262)

Reduced Course Load

As many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. A minimum of 50% of the courses proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted.

Eligibility for a Graduate Assistantship

Students in the IUG program will be eligible for a graduate assistantship starting in the beginning of the fifth year.

Tuition Charges

Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student received financial support, for example, an assistantship requiring the payment of graduate tuition (from "Information and Guidelines for Establishing Integrated Undergraduate - Graduate Degree Programs" - approved by the Graduate Council, May 8, 1996).

Integrated B.M. in Performance - M.A. in Music Theory and History

The School of Music offers a limited number of academically superior students enrolled in the Bachelor of Music the opportunity to enroll in an integrated program leading to both the B.M. in Performance and the Master of Arts in Music Theory and History in a continuous program of study culminating in both degrees. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to achieve greater depth and comprehensiveness than if the degrees are pursued sequentially and to earn the two degrees in five years.

Application Process

To initiate the application process, students must submit a transcript, faculty recommendation, writing sample, and statement of goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the IUG program. Normally a student would apply after the fourth semester and before the end of the sixth semester. For acceptance into the program students must successfully complete the following courses or their equivalent with a minimum average of 3.5 in their music courses, and a minimum GPA of 3.0.

4 semesters of music theory (MUSIC 131, MUSIC 132, MUSIC 231, MUSIC 331)

4 semesters of musicianship (MUSIC 121, MUSIC 122, MUSIC 221, MUSIC 222)

3 semesters of music history (MUSIC 162, MUSIC 261, MUSIC 262)

Reduced Course Load

As many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. A minimum of 50% of the courses proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted.

Eligibility for a Graduate Assistantship

Students in the IUG program will be eligible for a graduate assistantship starting in the beginning of the fifth year.

Tuition Charges

Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student received financial support, for example, an assistantship requiring the payment of graduate tuition (from "Information and Guidelines for Establishing Integrated Undergraduate - Graduate Degree Programs" - approved by the Graduate Council, May 8, 1996).

Integrated B.M. in Performance - M.A. in Musicology

The School of Music offers a limited number of academically superior students enrolled in the Bachelor of Music the opportunity to enroll in an integrated program leading to both the B.M. in Performance and the Master of Arts in Musicology in a continuous program of study culminating in both degrees. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to achieve greater depth and comprehensiveness than if the degrees are pursued sequentially and to earn the two degrees in five years.

Application Process

To initiate the application process, students must submit a transcript, faculty recommendation, writing sample, and statement of goals. A faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the IUG program. Normally a student would apply after the fourth semester and before the end of the sixth semester. For acceptance into the program students must successfully complete the following courses or their equivalent with a minimum average of 3.5 in their music courses, and a minimum GPA of 3.0.

4 semesters of music theory (MUSIC 131, MUSIC 132, MUSIC 231, MUSIC 331)

4 semesters of musicianship (MUSIC 121, MUSIC 122, MUSIC 221, MUSIC 222)

3 semesters of music history (MUSIC 162, MUSIC 261, MUSIC 262)

Reduced Course Load

As many as twelve of the credits required for the master's degree may be applied to both undergraduate and graduate degree programs. A minimum of 50% of the courses proposed to count for both degrees must be at the 500 level. Thesis credits may not be double counted.

Eligibility for a Graduate Assistantship

Students in the IUG program will be eligible for a graduate assistantship starting in the beginning of the fifth year.

Tuition Charges

Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student received financial support, for example, an assistantship requiring the payment of graduate tuition (from "Information and Guidelines for Establishing Integrated Undergraduate-Graduate Degree Programs" - approved by the Graduate Council, May 8, 1996).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2011 (MUSBM); Fall Semester 2002 (Integrated Programs)

Blue Sheet Item # 40-01-016 (MUSBM); 30-07-037, 30-07-039, 30-07-041 (Integrated Programs)

Review Date: 08/16/2011

Director name last updated: 01/13/06

AA

Naval Science (NAVSC)

The Naval ROTC trains qualified young men and women at the University Park campus for service as commissioned officers in the Navy, the Navy Nurse Corps, or the Marine Corps.

Entering freshmen may be accepted into the Naval ROTC through the Four-Year College Program or in the Four-Year Scholarship Program. Freshmen who are not on scholarship may join NROTC and be eligible to compete for the Scholarship Program. Qualified sophomores either in attendance or planning to commence studies at University Park Campus with their junior year, or who have applied for transfer to Penn State from another institution, may compete for the special Two-Year College Program and the Two-Year Scholarship Program. Navy, Nurse, and Marine Corps scholarships provide full tuition, book allotment, laboratory and instructional fees, and a \$250-350 per month subsistence allowance. In addition, Nurse scholarship students are issued special equipment required by the BSN curriculum.

Students who receive the baccalaureate degree and complete the NROTC program receive commissions as ensigns or second lieutenants. College Program commissionees are required to serve at least three years of active duty. Scholarship Program commissionees are committed to four years of active duty.

COURSES--All students must complete at least 18 credits of Naval Science (NAVSC) courses; subjects and credits appear under course descriptions (ROTC/NAVSC) later in this bulletin. College Program students must participate in one active duty training period (cruise) during the summer between junior and senior years. Scholarship students are required to participate in either two (Nurse) or three (Navy and Marine Corps) summer cruises prior to commissioning.

In addition, all Navy scholarship students must complete University courses in calculus, physics, national security policy, and American military affairs. Requirements for Nurse and Marine Corps scholarship students are somewhat less. College Program students must complete University courses in national security policy and American military affairs.

Effective Date: Current

Review Date: 4/19/04

Nuclear Engineering

University Park, College of Engineering (NUC E)

PROFESSOR KAREN A. THOLE, *Head, Department of Mechanical and Nuclear Engineering*
 PROFESSOR ARTHUR T. MOTTA, *Program Chair, Nuclear Engineering Program*

The overall educational objective of the Nuclear Engineering program is to help prepare our graduates to function effectively in the marketplace in a wide range of career paths in Nuclear Engineering. The technical part of the curriculum, emphasizes nuclear power engineering, which refers to complex systems used to generate electricity. Because of our strong educational and research emphasis in nuclear power engineering, and because a shortage for this expertise exists in the industry, generally the industry values our graduates highly. We recognize that nuclear science, including nuclear security and non-proliferation, is an important growth area. We constantly assess and review the needs of our undergraduate students and their most frequent employers and use this feedback to consider revisions to our curriculum so that it is responsive to the needs of our constituents.

Program Educational Objectives:

Accordingly, we will endeavor to maintain and provide a curriculum that prepares our graduates such that:

- Within two to three years of graduation, we expect the majority of our B.S. graduates to:
 - be working in industry, especially related to nuclear power engineering,
 - be working in government agencies or national laboratories,
 - be pursuing advanced degrees.
- We expect that our students will continue to develop professionally and establish themselves in their careers and in this way may take the opportunity to further their education and training by attending graduate school or by pursuing other professional development.

Program Outcomes (Student Outcomes):

The Program outcomes are knowledge, skills, and/or behavior that are derived from the program educational objectives.

- a. Students will demonstrate a knowledge of the fundamentals in mathematics, physics, chemistry and the engineering sciences necessary to the nuclear engineering profession.
- b. Students will demonstrate an ability to apply the fundamentals to understand, analyze and design nuclear systems; demonstrate knowledge of the contemporary issues affecting the nuclear engineering profession.
- c. Students will demonstrate the ability to use appropriate methods and technology for detection and measurement of radiation and for nuclear science.
- d. Students will be proficient in the oral and written communication of their work and ideas; show the ability to learn independently using appropriate technology; show ability to work well in teams.
- e. Students will demonstrate the ability to operate in a modern, diverse work environment; understand their professional and ethical responsibilities; and be aware of the safety, environmental, and societal consequences of their work in a global contexts

The first two years of the program stress fundamentals in mathematics, chemistry, physics, computer programming, and engineering sciences such as mechanics, materials, and thermodynamics. The last two years provide the breadth and depth in nuclear science, behavior of heat and fluids, reactor theory and engineering, and radiation measurement. The laboratory work includes experiments using the University's 1,000-kilowatt research reactor. Engineering design is incorporated in many courses from the freshman year to the senior year, but is particularly emphasized in the senior capstone design course, which integrates the critical elements of reactor theory, reactor engineering, safety considerations and economic optimization into a reactor design.

Many graduates are employed by electric power companies that use nuclear power plants, or by companies that help service and maintain those plants. They use their knowledge of engineering principles, radioactive decay, interactions of radiation with matter, and nuclear reactor behavior to help assure that the power plants meet the demand for reliable, economic electricity while ensuring a safe environment. To do this, graduates must be problem solvers who can develop and use complex computer models and sophisticated monitoring systems, design systems to handle radioactive waste, determine if the materials in the plant are becoming brittle or corroded, or manage the fuel in the reactor to get the maximum energy from it. Other graduates work in industries that use radioactivity or radiation to detect problems or monitor processes. Jobs are also found in branches of the government as designers of the next generation of reactors for submarines, aircraft carriers, or space probes, or to manage and clean up contaminated wastes. They could also be involved with regulation of nuclear power or radiation uses, or in research to develop advanced technologies that will be used in next-generation power plants. Graduates who want to further their education in the fields of health physics, radiation biology, or nuclear medical applications find this degree to be a useful preparation.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Nuclear Engineering, a minimum of 129 credits is required. This baccalaureate program in Nuclear Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 111 credits

(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (89 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), EDSGN 100(3), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), PHYS 211 GN(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#) (Sem: 1-2)
 EMCH 211(3), EMCH 212(3), EMCH 213(3), ME 300(3), MATH 230(4), MATH 251(4) [\[1\]](#), PHYS 214 GN(2) (Sem: 3-4)
 EE 212(3), EMCH 315(2), EMCH 316(1), ME 320(3), ME 410(3), NUCE 301(4) [\[1\]](#), NUCE 302(4) [\[1\]](#), NUCE 309(3) [\[1\]](#), NUCE 450(3) [\[1\]](#) (Sem: 5-6)
 ENGL 202C GWS(3), NUCE 310(2), NUCE 403(3), NUCE 430(3) [\[1\]](#), NUCE 431(4), NUCE 451(3) (Sem: 7-8)

ADDITIONAL COURSES (19 credits)

Select 1 credit of First-Year Seminar (Sem: 1-2)
 ECON 102 GS(3), ECON 104 GS(3) or EBF 200 GS(3) (Sem: 1-2)
 ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
 CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
 CMPSC 200 GQ(3) or CMPSC 201 GQ(3) (Sem: 3-4)
 Select 6 credits, of which 3 credits must be designated as design, from BME 406(3), NUCE 405(3), NUCE 407(3), NUCE 408(3), NUCE 409(3), NUCE 420(3), NUCE 428(3), NUCE 446(3), NUCE 470(3), NUCE 490(3), NUCE 496(1-18), NUCE 497(1-9) or 500-level NUC E courses with approval of adviser (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

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(These courses may have to be chosen so that the engineering design or engineering science requirements for the major are met.)
Select 3 credits in General Technical Elective (GTE) courses from department list. (Sem: 7-8)
(Students who complete Basic ROTC may substitute 6 of the ROTC credits for 3 credits of GTE and 3 credits of GHA.)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-037

Review Date: 8/22/17

R & T: Approved 5/24/2013

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

[Comments](#)

EN

Nursing

Altoona College

Penn State Abington

Penn State Erie, The Behrend College

Penn State Harrisburg

University College: Penn State Fayette, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Worthington Scranton

University Park, School of Nursing (NURN)

World Campus

PROFESSOR PAULA MILONE-NUZZO, *Dean, College of Nursing*

This major prepares registered nurse students as professional practitioners in areas of health promotion and maintenance, illness care, and rehabilitation. The major in Nursing is accredited by the Commission on Collegiate Nursing Education (CCNE), One DuPont Circle, NW Suite 530, Washington, DC 20036 (202-463-6930). Part-time or full-time study is available at any of the campus sites. The University Park site is a blended program, which includes resident instruction and online nursing courses. The World Campus site is completely online.

Senate legislation 42-97 *Credit by Portfolio Assessment* enables students to receive credit for certain prescribed nursing courses based on their RN licensure.

Students must meet all requirements of the clinical institutions that provide preceptors and clinical experiences. These requirements may include CPR certification, professional liability insurance, health examination, drug testing, criminal background check (State and Federal) and child abuse history clearances. Students also are responsible for their own transportation to and from clinical settings and may need the use of a car.

Graduates of this major may qualify for admission to a graduate nursing program.

For the B.S.N. degree in Nursing, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 3-5 credits

REQUIREMENTS FOR THE MAJOR: 91-93 credits^[1]

(This includes 21 credits of General Education courses: 3 credits of GHA courses; 9 credits of GN courses; 3 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (73 credits)

BIOL 129 GN(4), BIOL 141 GN(3), BIOL 142(1), HDFS 129 GS(3), MICRB 106 GN(3), MICRB 107 GN(1), NUTR 251 GHA(3), PSYCH 100 GS(3) (Sem: 1-4)

NURS 200W(3)^[38], NURS 357(3)^[38], NURS 390 US(3)^[38] (Sem: 3-4)

NURS 225(3)^[37], NURS 230(4)^[37], NURS 250 US(2)^[37], NURS 301(4)^[37], NURS 305(3)^[37], NURS 306(3)^[37],

NURS 310(3)^[37], NURS 320(3)^[37], NURS 405B(4)^[37], NURS 420(4)^[37] (Sem: 5-6)

NURS 417 US;IL(4)^[38], NURS 465(3)^[38], NURS 475(3)^[38] (Sem: 7-8)

ADDITIONAL COURSES (12-14 credits)

Select 3-4 credits from: CHEM 101 GN(3); or CHEM 110 GN(3) and CHEM 111 GN(1) (Sem: 1-4)

Select 3 credits from: SOC 1 GS(3) or SOC 5 GS(3) (Sem: 1-4)

Select 3-4 credits from: STAT 200 GQ(4) or STAT 250 GQ(3) (Sem: 1-4)

Select 3 credits from: NURS 251(3)^[38] or NURS 352(3)^[38] (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from courses on school-approved list in consultation with adviser (3 credits of which must be at the 400 level)

^[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

^[37] Credit by Portfolio Assessment

^[38] Due to restricted enrollment, the School of Nursing assigns the semester in which students enroll in these courses and all course prerequisites must be successfully completed.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-02-078

Review Date: 10/3/2017

UCA Revision #1: 8/9/06

HH

Updated contact info for ACEN accrediting agency: 7/31/13

Nursing

Penn State Altoona (General Nursing and Second Degree)

Penn State Erie, Behrend Campus (General Nursing)

Penn State Harrisburg (Second Degree)

University Park (General Nursing)

University College: Penn State Fayette, Penn State Mont Alto, Penn State Worthington Scranton (General Nursing)

PROFESSOR JANICE PENROD, *Interim Dean, College of Nursing*

The Bachelor of Science Degree in Nursing prepares students to become professional practitioners in areas of health promotion and maintenance, illness care, and rehabilitation. After earning this degree in Nursing, students are qualified to take the registered nurse examination for licensure by the State Board of Nursing. The Nursing major is accredited by the Commission on Collegiate Nursing Education (CCNE), One DuPont Circle, NW Suite 530, Washington, DC 20036 (202-463-6930); and approved by the Pennsylvania State Board of Nursing.

B.S.N. Nursing majors will choose one of the following options:

General Nursing Option (NURS GNURS): This option admits students directly to the major as first year students and at the time of admission only. Nursing students will start and remain at the campus of admission all 4 years. Non-nursing students may not transfer or change major into the 4-year nursing program at University Park, but will be considered through a competitive review process for admission at the 5 other campuses offering the General Nursing program. Clinical experiences occur at clinical facilities within a 50-mile radius of campus; University Park students will spend 1-2 years at Penn State Hershey Medical Center, which requires students to reside at that location.

Second or Additional Degree Option (NURS SCND): This option admits students, who have successfully completed a bachelor's degree in another discipline, to the major through a review process. All students must have met all general education and prerequisite course requirements. This option is available at Penn State Altoona and Penn State Harrisburg. Clinical experiences occur at facilities surrounding Altoona and Harrisburg.

For Both Options: All transportation and expenses related to clinical are the responsibility of the student. All students must carry professional liability insurance; complete an annual health examination, criminal background and child abuse history clearance; drug testing; maintain CPR certification and adhere to any additional requirements of the clinical facilities. A laptop computer is required.

Undergraduate Academic Progression Policy

The Academic Progression policy delineates the academic standards for pre-licensure students (students without an RN license). Failure of two nursing courses results in dismissal from the Nursing major. Details of the academic progression policy are available in the student handbook. (<http://www.nursing.psu.edu/undergrad/handbooks/>).

For the B.S.N. degree in Nursing, a minimum of 120 credits is required. The Second or Additional Degree Option requires the completion of 60 credits of general education and prerequisite courses in the first degree program (prior to admission) and 60 credits of nursing courses completed after admission.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

(Second or Additional Degree Option: First-Year Seminar not required since students accepted into this program are required to have earned a bachelor's degree in another discipline)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 4-9 credits

REQUIREMENTS FOR THE MAJOR: 87-92 credits [\[1\]](#) [\[2\]](#)

(This includes 21 credits of General Education courses: 3 credits of GHA courses; 9 credits of GN courses; 3 credits of GQ courses; 6 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 30-32 credits

PRESCRIBED COURSES (21 credits)

BIOL 129 GN(4), BIOL 141 GN(3), BIOL 142(1), HDFS 129 GS(3), MICRB 106 GN(3), MICRB 107 GN(1), NUTR 251 GHA(3), PSYCH 100 GS(3) (Sem: 1-4)

ADDITIONAL COURSES (9-11 credits)

CHEM 101(3); or CHEM 110 GN(3) and CHEM 111 GN(1) (Sem: 1-4)

SOC 1 GS(3) or SOC 5 GS(3) (Sem: 1-4)

STAT 200 GQ(4) or STAT 250 GQ(3) (Sem: 1-4)

REQUIREMENTS FOR THE OPTION: 57-60 credits

GENERAL NURSING OPTION: (57 credits)

PRESCRIBED COURSES (54 credits)

NURS 225(3) [\[38\]](#), NURS 230(4) [\[38\]](#), NURS 250 US(2) [\[38\]](#), NURS 251(3) [\[38\]](#) (Sem: 3-4)

NURS 200W(3) [\[38\]](#), NURS 301(4) [\[38\]](#), NURS 305(3) [\[38\]](#), NURS 306(3) [\[38\]](#), NURS 310(3) [\[38\]](#), NURS 320(3) [\[38\]](#), NURS 350(2) [\[38\]](#) (Sem: 5-6)

NURS 405A(4) [\[38\]](#), NURS 405B(4) [\[38\]](#), NURS 415 US;IL(4) [\[38\]](#), NURS 420(4) [\[38\]](#), NURS 450A(2) [\[38\]](#), NURS 450B(3) [\[38\]](#) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits at the 400 level from School-approved list in consultation with adviser (Sem: 7-8)

SECOND OR ADDITIONAL DEGREE OPTION: (60 credits)

PRESCRIBED COURSES (60 credits)

NURS 225(3) [\[38\]](#), NURS 230(4) [\[38\]](#), NURS 250 US(2) [\[38\]](#), NURS 251(3) [\[38\]](#) (Sem: 1)

NURS 200W(3) [\[38\]](#), NURS 301(4) [\[38\]](#), NURS 305(3) [\[38\]](#), NURS 310(3) [\[38\]](#), NURS 350(2) [\[38\]](#) (Sem: 2)

NURS 306(3) [\[38\]](#), NURS 320(3) [\[38\]](#), NURS 415 US;IL(4) [\[38\]](#), NURS 420(4) [\[38\]](#) (Sem: 3)

NURS 405A(4) [\[38\]](#), NURS 405B(4) [\[38\]](#), NURS 450A(2) [\[38\]](#), NURS 450B(3) [\[38\]](#), NURS 495(6) [\[38\]](#) (Sem: 4)

[1]A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] Completed prior to admission for students taking the Second or Additional Degree Option.

[38] Due to restricted enrollment, the School of Nursing assigns the semester in which students enroll in these courses and all course prerequisites must be successfully completed.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-03-056

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Review Date: 11/15/2016

(R&T 2/28/06)

UCA Revision #1: 8/9/06

Update to accrediting agency contact info: 7/31/13

[Comments](#)

HH

Nutritional Sciences

University Park, College of Health and Human Development (NUTR)

PROFESSOR CATHARINE ROSS, *Head of the Department*

The study of nutrition is a dynamic science that incorporates knowledge of human biology and biochemistry to understand how the body utilizes nutrients and related substances for optimal health throughout the lifecycle. Students gain an understanding of how the interplay of nutrition and lifestyle relate to current public health issues as well as the development and nutrition management of chronic and acute diseases. Students learn the scientific rationale and practice methodology to assess nutritional status for individuals in the clinical setting and for population analysis. They will use these skills to implement medical nutrition therapy or understand nutrition guidelines, standards, and policies.

Students may select one or more options: Applied Sciences, Basic Sciences, and Dietetics. Students in any option can choose from one or more of four emphases: Public Health Nutrition and Policy; Nutrition and Foods in Business; Community Nutrition and Food Security; or Nutrition Education and Communications.

APPLIED SCIENCES OPTION: This option integrates knowledge of social and behavioral sciences with human physiology and nutrition. Students learn to apply knowledge of nutrition to improve health and well-being of individuals and populations by applying nutrition principles in different practice settings. Graduates of this option can seek employment in public health and policy, food industry, management, community and international agencies, school food service, or continue to graduate study in nutrition or related fields.

BASIC SCIENCES OPTION: This option incorporates knowledge from biology, chemistry, physiology, and physics with nutrition. This option is recommended for students preparing for careers in medicine and other health related fields such as dentistry, optometry, physician assistant, physical therapy, and chiropractic, including graduate school. Also, this option prepares students for careers in laboratory research in the pharmaceutical or food industries, government, or academia.

DIETETICS OPTION: This option links nutrition and human behavior to improve the nutritional status of individuals and communities or apply nutrition principles and counseling skills to medical problems in clinical dietetics. It also prepares students for management positions in nutrition and food systems. Graduates satisfy the current requirements for application to an accredited post-baccalaureate dietetic internship. Upon satisfactory completion of a Dietetic Internship, graduates are eligible to take the registration examination to become a Registered Dietitian.

Admission to the Dietetics Option: C or better in NUTR 251, BIOL 141, and CHEM 110

For the B.S. degree in Nutritional Sciences, a minimum of 120 credits is required.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. NUTR requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(17-22 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 5-8 credits

REQUIREMENTS FOR THE MAJOR: 86-87 credits

(This includes 16-20 credits of General Education courses: Applied Sciences Option: 7-9 credits of GN courses; 3-4 credits of GQ courses; 6 credits of GS courses; 3 credits of GHA courses; or Basic Sciences Option: 7-9 credits of GN courses; 6 credits of GQ courses; 3 credits of GHA courses; or Dietetics Option: 7-9 credits of GN courses; 3-4 credits of GQ courses; 3 credits of GS courses; 3 credits of GHA courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 29-30 credits

PRESCRIBED COURSES (23 credits)

NUTR 251 GHA(3) [\[1\]](#), NUTR 358(2) (Sem: 1-3)

BMB 211(3) [\[1\]](#), NUTR 445(3) [\[1\]](#), NUTR 446(3) [\[1\]](#), NUTR 451(3) [\[1\]](#) (Sem: 5-7)

NUTR 452(3), NUTR 490(3) (Sem: 7-8)

ADDITIONAL COURSES (6-7 credits)

STAT 200 GQ(4) or STAT 250(3) (Sem: 1-3)

CHEM 202(3) or CHEM 210(3) (Sem: 2-4)

REQUIREMENTS FOR THE OPTION: 57 credits

APPLIED SCIENCES OPTION: (57 credits)

PRESCRIBED COURSES (30 credits)

BIOL 141 GN(3), CHEM 110 GN(3) (Sem: 1-3)

MICRB 106 GN(3), MICRB 107 GN(1), NUTR 320(3), NUTR 360(3) (Sem: 4-6)

HM 228(1), HM 329(3), HM 330(2), NUTR 456 US(3) (Sem: 5-6)

NUTR 370(1), NUTR 400(1), NUTR 453(3) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

AGBM 101 GS(3), ECON 102 GS(3), or ECON 104 GS(3) (Sem: 1-4)

HDFS 129 GS(3) or PSYCH 100 GS(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 21 credits, in consultation with an adviser, from University-wide offerings that provide relevance to this option. See program list of recommended courses. (At least 6 credits must be at the 400 level and, of those, no more than 3 credits may be NUTR 496.) (Sem: 3-8). Students are encouraged to select one (or more) of four Emphases: Public Health Nutrition and Policy; Nutrition and Foods in Business; Community Nutrition and Food Security; and Nutrition Education and Communications. A minimum of 15 credits is recommended for an Emphasis.

BASIC SCIENCES OPTION: (57 credits)

PRESCRIBED COURSES (38 credits)

BIOL 110 GN(4), BIOL 141 GN(3), BIOL 142(1), BIOL 230W GN(4), CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4) (Sem: 1-3)

BMB 212(1), MICRB 201(3), MICRB 202(2), PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 3-4)

ADDITIONAL COURSES (3 credits)

CHEM 203(3) or CHEM 212(3) (Sem: 4-6)

SUPPORTING COURSES AND RELATED AREAS (16 credits)

Select 16 credits, in consultation with an adviser, from University-wide offerings that provide relevance to this option. See program list of recommended courses. (At least 9 credits must be at the 400 level and, of those, no more than 6 credits may be NUTR 496.) (Sem: 3-8)

DIETETICS OPTION: (57 credits)**PRESCRIBED COURSES** (38 credits)

BIOL 141 GN(3) [\[1\]](#), CHEM 110 GN(3) [\[1\]](#) (Sem: 1-3)

MICRB 106 GN(3), MICRB 107 GN(1), NUTR 320(3), NUTR 360(3) (Sem: 4-6)

HM 228(1), HM 329(3), NUTR 456 US(3), NUTR 391(1), (Sem: 5-6)

HM 330(2), NUTR 370(1), NUTR 386(3) (Sem: 6-8)

NUTR 371(1), NUTR 400(1), NUTR 453(3), NUTR 495(3) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)

HDFS 129 GS(3) or PSYCH 100 GS(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (16 credits)

Select 16 credits, in consultation with an adviser, from University-wide offerings that provide relevance to this option. See program list of recommended courses. (At least 6 credits must be at the 400 level and, of those, no more than 3 credits may be NUTR 496.) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-06-135

Review Date: 04/10/2012

UCA Revision #1: 8/9/06

HH

Organizational Leadership

University Park, College of the Liberal Arts (OL BA): offered via World Campus

PROFESSOR Brian Redmond, Professor-in-charge

The degree draws on many of the disciplines of the liberal arts, as well as business and science, to illuminate the issues that all leaders face regarding work and employment issues in the 21st Century, as well as in other aspects of organizational life more generally. Students select courses in crime, law, and justice, political science, sociology, labor and employment relations, communication arts and sciences, management, and psychology. The goal is to provide a broad education that introduces methods of analysis used in the disciplines of the liberal arts and prepares students to understand the complex social, cultural, and organizational issues that they will confront in leadership positions in the modern world. Upon successful completion of the B.A. degree in Organizational Leadership, students should be better able to:

1. Understand the roles and the major functions of leadership in contemporary organizations;
2. Articulate the theoretical and empirical foundations for different approaches to the exercise of leadership;
3. Detect, accurately frame, and select appropriate strategies for overcoming obstacles to effective organizational performance that leaders face;
4. Exhibit intellectual and behavioral competencies useful in the successful execution of critical organizational tasks and the management of relationships;
5. Recognize the internal structures of organizations and their impact on members' performance;
6. Appreciate the social processes operative in the exercise of influence, as well as how to improve them;
7. Draw on their knowledge of leadership in transitioning from lower-level to higher-level positions of responsibility and authority in organizations;
8. Bring a global perspective to the exercise of leadership; and
9. Grasp the importance of enacting leadership responsibly and in an ethically defensible manner.

For the B.A. degree in Organizational Leadership, a minimum of 123 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 21-24 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36-37 credits [1]

(This includes 0-6 credits of General Education courses: 0-6 credits of GS; 0-3 credits of GH.)

PRESCRIBED COURSES (12 credits)

OLEAD 100 GS(3), OLEAD 409(3), OLEAD 464(3), OLEAD 465(3) (Sem: 1-5)

ADDITIONAL COURSES (12-13 credits)

Select one course from each area

a) Conflict Management

CAS 404(3) or LER 437(3) (Sem: 5-8)

b) Research Methods

LER 312(4) or SOC 207(3) (Sem: 5-8)

c) Motivation

MGMT 321(3) or PSYCH 484(3) (Sem: 5-8)

d) Ethics

LER 460(3) or PHIL 119(3) (Sem: 5-8)

SUPPORTING COURSES (12 credits)

(Courses that are used in the Additional Courses category may not be double-counted to satisfy this requirement)

Select 12 credits from the following with at least 6 credits at the 400-level:

CAS 404(3), CAS 452(3), CAS 475(3), CRIM 100 GS(3), CRIM 113 US(3), CRIM 482(3), LER 100 GS(3), LER 136 US(3), LER 201 GS(3), LER 312(4), LER 400 IL(3), LER 434(3), LER 435(3), LER 437(3), LER 458Y US(3), LER 460(3), MGMT 321(3), PHIL 103 GH(3), PHIL 119(3), PLSC 1 GS(3), PLSC 490(3), PSYCH 484(3), PSYCH 485(3), SOC 207(3), SOC 404(3), SOC 455(3), SOC 456(3) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2013

Blue Sheet Item #: 41-04-064

Review Date: 01/15/2013

Organizational Leadership

Berks College

University Park, College of the Liberal Arts (OL BS): offered via World Campus

PROFESSOR Brian Redmond, *Professor-in-charge*

The degree draws on many of the disciplines of the liberal arts, as well as business and science, to illuminate the issues that all leaders face regarding work and employment issues in the 21st Century, as well as in other aspects of organizational life more generally. Students select courses in crime, law, and justice, economics, political science, sociology, labor and employment relations, communication arts and sciences, statistics, management, and psychology. The goal is to provide a broad education that introduces methods of analysis used in the disciplines of the liberal arts and prepares students to understand the complex social, cultural, and organizational issues that they will confront in leadership positions in the modern world. Upon successful completion of the B.S. degree in Organizational Leadership, students should be better able to:

1. Understand the roles and the major functions of leadership in contemporary organizations;
2. Articulate the theoretical and empirical foundations for different approaches to the exercise of leadership;
3. Detect, accurately frame, and select appropriate strategies for overcoming obstacles to effective organizational performance that leaders face;
4. Exhibit intellectual and behavioral competencies useful in the successful execution of critical organizational tasks and the management of relationships;
5. Recognize the internal structures of organizations and their impact on members' performance;
6. Appreciate the social processes operative in the exercise of influence, as well as how to improve them;
7. Draw on their knowledge of leadership in transitioning from lower-level to higher-level positions of responsibility and authority in organizations;
8. Bring a global perspective to the exercise of leadership; and
9. Grasp the importance of enacting leadership responsibly and in an ethically defensible manner.

For the B.S. degree in Organizational Leadership, a minimum of 123 credits is required.

GENERAL EDUCATION: 45 credits

(4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selections, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

REQUIREMENTS FOR THE MAJOR: 64-66 credits^[1]

(This includes 4 credits of General Education GQ courses.)

PRESCRIBED COURSES (34 credits)

CAS 352(3), ECON 102 GS(3), ECON 104 GS(3), OLEAD 100 GS(3), OLEAD 409(3), OLEAD 464(3), OLEAD 465(3), PHIL 10 GH(3), PSYCH 100 GH(3), PSYCH 281 GS(3), STAT 200 GQ(4) (Sem: 1-5)

ADDITIONAL COURSES (12-13 credits)

Choose one course from each area.

1. Conflict Management
CAS 404(3) or LER 437(3) (Sem: 5-8)
2. Research Methods
LER 312(4) or SOC 207(3) (Sem: 5-8)
3. Motivation
MGMT 321(3) or PSYCH 484(3) (Sem: 5-8)
4. Ethics
LER 460(3) or PHIL 119 GH(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (18-19 credits)

At least 15 credits must be at the 400-level.

(Courses that are used in the Additional Courses category may not be double-counted to satisfy this requirement.)

CAS 404(3), CAS 452(3), CAS 475(3), CRIM 100 GS(3), CRIM 113 US(3), CRIM 482(3), LER 100 GS(3), LER 136 US(3), LER 201 GS(3), LER 312(4), LER 400 IL(3), LER 434(3), LER 435(3), LER 437(3), LER 458Y US(3), LER 460(3), MGMT 321(3), PHIL 103 GH(3), PHIL 119(3), PLSC 1 GS(3), PLSC 490(3), PSYCH 484(3), PSYCH 485(3), SOC 207(3), SOC 404(3), SOC 455(3), SOC 456(3) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-04-065

Review Date: 01/15/2013

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

LA

Organizational and Professional Communication

University Park, College of The Liberal Arts offered via the World Campus (ORPCM_BA)

Lecturer in Communication Arts and Sciences, Amber Jackson, *in charge*

A Bachelor of Arts in Organizational and Professional Communication provides increased understanding and practice in how people communicate to influence others and shape the world around them. Modern society requires effective communication in professional, personal, social, and multicultural settings. The flexibility of the program offers preparation for a variety of careers, such as law, business, communication, health, administration, social services, and human relations. The bachelor of arts program will facilitate students' learning of effective oral and written communication, specifically helping students to understand and generate professional texts in a variety of genres. Upon completion of the Organizational and Professional Communication program, students will be able to:

- Describe the significance of communication in everyday experience and as a distinctive intellectual paradigm;
- Apply, critique, and extend communication concepts, principles, theories, and perspectives to a variety of organizational contexts;
- Plan communication inquiry, including humanistic or social scientific approaches;
- Apply qualitative research methods to organizational and professional contexts;
- Demonstrate logical, critical, creative, and ethical thinking about communication for decision-making and problem-solving;
- Generate and perform messages appropriate to their audience, purpose, and context;
- Locate, synthesize, and assimilate new information from a variety of sources and use it to inform communication analysis and practice within organizations;
- Engage diverse communities, both local and global, and function as a member of a deliberative society;
- Write professional texts in a variety of genres using appropriate conventions;
- Reflect on professional experience and situate that experience within college-level learning.

For the B.A. degree in Organizational and Professional Communication, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(9 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

ELECTIVES: 15 credits

REQUIREMENTS FOR THE MAJOR: 45 credits [\[1\]](#)

(This includes 9 credits of General Education courses: 3 credits of GH; 6 credits of GS courses.)

PRESCRIBED COURSES (21 credits)

CAS 201 GH(3), CAS 202 GS(3), CAS 204(3), CAS 390 GS(3), CAS 426 WAC(3), LA 201 WAC(3) (Sem: 1-5)

CAS 496(3) (Sem: 8)

ADDITIONAL COURSES (9 credits)

Select 3 credits in speaking and argumentation from: CAS 212(3); CAS 215(3); CAS 252(3) or CAS 340(3) (Sem: 3-6)

Select 3 credits in interpersonal communication or conflict management from: CAS 203 GS(3); CAS 271 US;IL(3); CAS 302(3) or CAS 352(3) (Sem: 3-6)

Select 3 credits in written communication from: ENGL 418(3); ENGL 419(3); ENGL 420(3) or ENGL 480(3) (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS: (15 credits)

Select 15 credits from the following courses; at least 9 credits must be at the 400-level. [\[2\]](#)

CAS 203 GS(3); CAS 212(3); CAS 215(3); CAS 252(3); CAS 271 US;IL(3); CAS 302(3); CAS 340(3); CAS 352(3); CAS 404(3); CAS 452(3); CAS 455(3); CAS 475(3); COMM 428A(3); ENGL 418(3); ENGL 419(3); ENGL 420(3); ENGL 480(3); LER/OLEAD 464(3); LER/OLEAD 465(3); or OLEAD 410(3) (Sem: 6-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] A student may not use a course as both an ADDITIONAL course and as a SUPPORTING course.

[3] A student may only apply up to 6 credits of CAS 496 in REQUIREMENTS FOR THE MAJOR.

Blue Sheet Item #: 45-06-039

Review Date: 4/4/17

Organizational and Professional Communication

University Park, College of The Liberal Arts offered via the World Campus (ORPCM_BS)

Lecturer in Communication Arts and Sciences, Amber Jackson, *in charge*

A Bachelor of Science in Organizational and Professional Communication provides increased understanding and practice in how people communicate to influence others and shape the world around them. Modern society requires effective communication in professional, personal, social, and multicultural settings. The flexibility of the program offers preparation for a variety of careers, such as law, business, communication, health, administration, social services, and human relations. The Bachelor of Science degree will allow exploration of the group communication context and the principles of leadership. Upon completion of the Organizational and Professional Communication program, students will be able to:

- Describe the significance of communication in everyday experience and as a distinctive intellectual paradigm;
- Apply, critique, and extend communication concepts, principles, theories, and perspectives to a variety of organizational contexts;
- Plan communication inquiry, including humanistic or social scientific approaches;
- Apply quantitative and qualitative research methods to organizational and professional contexts;
- Demonstrate logical, critical, creative, and ethical thinking about communication for decision-making and problem-solving;
- Generate and perform messages appropriate to their audience, purpose, and context;
- Locate, synthesize, and assimilate new information from a variety of sources and use it to inform communication analysis and practice within organizations;
- Engage diverse communities, both local and global, and function as a member of a deliberative society;
- Facilitate groups communication and functions in and out of organizations;
- Apply principles of leadership to interpersonal and group situations;
- Demonstrate critical and ethical understanding of conflict in interpersonal, group, and organizational settings;
- Reflect on professional experience and situate that experience within college-level learning.

For the B.S. degree in Organizational and Professional Communication, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6-9 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 27 credits

REQUIREMENTS FOR THE MAJOR: 57 credits [\[1\]](#)

(This includes 6-9 credits of General Education courses: 3 credits of GH; 3-6 credits of GS courses.)

PRESCRIBED COURSES (24 credits)

CAS 201 GH(3), CAS 202 GS(3), CAS 204(3), CAS 390 GS(3), CAS 426W(3), LA 201 WAC(3), SOC 207(3) (Sem: 1-5)

CAS 496(3) (Sem: 8)

ADDITIONAL COURSES (18 credits)

Select 6 credits in speaking and argumentation from: CAS 212(3); CAS 215(3); CAS 252(3) or CAS 340(3) (Sem: 3-6)

Select 6 credits in interpersonal communication or conflict management from: CAS 203 GS(3); CAS 271 US;IL(3); CAS 302(3) or CAS 352(3) (Sem: 3-6)

Select 6 credits in leadership/group communication from: LER/OLEAD 464(3); LER/OLEAD 465(3); OLEAD 410 IL(3); MGMT 321(3); PSYCH 484(3); PSYCH 485(3); SOC 404(3) or SOC 456(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS: (15 credits)

Select 15 credits from the following courses; 6-9 must be at the 400-level [\[2\]](#)

CAS 203 GS(3); CAS 212(3); CAS 215(3); CAS 252(3); CAS 271 US;IL(3); CAS 302(3); CAS 340(3); CAS 352(3); CAS 404(3); CAS 452(3); CAS 455(3); CAS 475(3); COMM 428A(3); ENGL 418(3); ENGL 419(3); ENGL 420(3); LER/OLEAD 464(3); LER/OLEAD 465(3); MGMT 321(3); OLEAD 410(3); PSYCH 484(3); PSYCH 485(3); SOC 404(3) or SOC 456(3) (Sem: 6-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] A student may not use a course as both an ADDITIONAL course and as a SUPPORTING course.

[3] A student may only apply up to 6 credits of CAS 496 in REQUIREMENTS FOR THE MAJOR.

Blue Sheet Item #: 45-06-040

Review Date: 4/4/17

Premedicine

University Park, Eberly College of Science (P M)

PROFESSOR RONALD A. MARKLE, *in charge*

This major provides a broad foundation necessary to the understanding of the basic subjects of modern medical studies. The curriculum, which offers a good balance between science and nonscience courses, constitutes an excellent preparation for admission to medical school. It also gives students the freedom to tailor the program to meet their individual needs by permitting a generous number of supporting courses. Specific admission requirements or recommendations of a particular medical school, not already in the required courses of the major, may be included among the supporting courses. Many students also use their supporting courses to pursue a minor.

In order to be eligible for entrance to the Premedicine major, a student must have: 1) attained at least a 3.20 cumulative grade-point average; and 2) completed BIOL 110 GN(4), BIOL 230W GN(4), CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 210(3), MATH 140 GQ(4), MATH 141 GQ(4) and earned a grade of C or better in each of these courses.

THREE-YEAR ALTERNATIVE: A student may also become eligible for the Bachelor of Science degree in this major upon satisfactory completion of:
 a. A total of 96 credits, including General Education credits in Writing/Speaking, Health Sciences and Physical Education, and Arts, Humanities, and Social and Behavioral Sciences; 8 credits in a single foreign language; BIOL 110 GN(4), BIOL 230W GN(4); CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 210(3) [\[1\]](#), CHEM 212(3) [\[1\]](#), CHEM 213(2) [\[1\]](#); MATH 140 GQ(4), MATH 141 GQ(4); PHYS 211 GN(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#), PHYS 213 GN(2) [\[1\]](#) and PHYS 214 GN(2) [\[1\]](#).
 b. The first year of an accredited medical or dental postgraduate program.

For the B.S. degree in Premedicine, a minimum of 126 credits is required, with at least 18 credits at the 400 level.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 105 credits

(This includes 24 credits of General Education courses; 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GHA courses.)

PRESCRIBED COURSES (59 credits)

BIOL 110 GN(4) [\[1\]](#), BIOL 230W GN(4) [\[1\]](#), CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), CHEM 112 GN(3) [\[1\]](#), CHEM 113 GN(1) [\[1\]](#), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), NUTR 251 GHA(3) [\[1\]](#) (Sem: 1-2)

HPA 101(3), PHIL 432(3), PSYCH 100 GS(3), SOC 1 GS(3) (Sem: 1-6)

CHEM 210(3) [\[1\]](#), CHEM 212(3) [\[1\]](#), CHEM 213(2) [\[1\]](#) (Sem: 3-4)

PHYS 211 GN(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#), PHYS 213 GN(2) [\[1\]](#), and PHYS 214 GN(2) [\[1\]](#) (Sem: 3-6)

ADDITIONAL COURSES (16-20 credits)

Select 4-5 credits from BIOL 220W GN(4), BIOL 240W GN(4), MICRB 201(3)/MICRB 202(2) (Sem: 3-8)

Select 3-4 credits from STAT 200 GQ(4) or STAT 250 GQ(3) (Sem: 3-8)

Select 4-5 credits [\[1\]](#) from BIOL 421(4); BIOL 437(4); BIOL 472(3) and BIOL 473(2); MICRB 412(3) and MICRB 422(2) (Sem: 5-8)

Select 5-6 credits [\[1\]](#) from BMB 400(2-3), BMB 401(3), BMB 402(3); or CHEM 450(3), CHEM 452(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (26-30 credits)

Select 0-8 credits in a foreign language (proficiency demonstrated by examination or course work to the level of the second semester; if fewer than 8 credits are needed to reach the required proficiency, students choose selections from program list to total 8 credits) (Sem: 1-8)

Select 18-30 credits from program list (A maximum of 12 credits of Independent Study [296, 496] may be applied toward credits for graduation. Students may apply 6 credits of ROTC.) (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

SC

Publications updated faculty in charge: 7/17/09

Premedical-Medical

University Park, Eberly College of Science (P M M)

PROFESSOR RONALD A. MARKLE, *in charge*

This is a special accelerated program in cooperation with the Sydney Kimmel Medical College (SKMC) at Thomas Jefferson University in Philadelphia whereby exceptional students have the opportunity to earn both the B.S. and M.D. degrees in seven years. Students are selected for this program while they are seniors in high school and must begin their undergraduate studies the fall immediately following their graduation. The first three years of the program are completed at University Park and the next four at SKMC Jefferson. The Penn State B.S. degree in Premedical-Medical is awarded after completion of 96 Penn State credits and successful completion of the first year of the standard curriculum at SKMC Jefferson Medical College.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selection)

ELECTIVES: 0-1 credit

REQUIREMENTS FOR THE MAJOR: 64-66 credits

(This includes 15 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses.)

PRESCRIBED COURSES (46 credits)

CHEM 110 GN(3)[1], CHEM 111 GN(1)[1], CHEM 112 GN(3)[1], CHEM 113 GN(1)[1], MATH 140 GQ(4)[1], MATH 141 GQ(4)[1] (Sem: 1-2)

CHEM 210(3), CHEM 212(3), CHEM 213(2), PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2) (Sem: 3-4)

BMB 401(3)[1], BMB 402(3)[1], BIOL 110 GN(4)[1] (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (10-20 credits)

Select 4-5 credits of life science with lab (Sem: 1-6)

Select 3 credits from program list (Sem: 1-6)

0-8 credits in a foreign language (proficiency demonstrated by examination or course work to the level of the second semester; if fewer than 8 credits are needed to reach the required proficiency, students choose selections from program list to total 8 credits) (Sem: 1-6)

Select 3-4 credits of life science (Sem: 3-6)

Note: Depending on advanced placement credit and schedule load, it might also be necessary to enroll during one of the other summer sessions before entering SKMC Jefferson Medical College at semester seven.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

UCA Revision #1: 8/9/06

SC

Publications updated faculty in charge: 7/17/09

Planetary Science and Astronomy

University Park, Eberly College of Science (PASTR)

Professor Donald Schneider, Chair

Planetary Science and Astronomy majors will study the Earth system in the context of the Solar System and the universe as a whole. Students will apply methods and knowledge from mathematics, geosciences, chemistry, biology, astronomy and physics, and through laboratory experiences and coursework they will both learn to explore the Earth and to use telescopes to obtain astronomical data. They will study planetary systems around other stars and explore the possibility of their harboring life. Communication of these topics, both oral and written, to the public and to their peers will be emphasized, as will logic and general problem-solving skills. Upon graduation students will be prepared to enter a graduate program in education to obtain teaching certification, to work in an informal science venue or planetarium, or to enter a variety of industry, environmental, or defense professions.

In order to be eligible for entrance to the Planetary Science and Astronomy major, a student must have: 1) Attained at least a 2.00 cumulative grade-point average; 2) Completed Math 140 with a grade of C or better; 3) Completed at least four of the following courses with a grade of C or better: ASTRO 120, ASTRO 130, ASTRO 140, BIOL 110, CHEM 110, EARTH 2, GEOSC 1, GEOSC 20, or STAT 200.

A minimum of 122 credits is required to earn the degree.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of the Bulletin)

FIRST-YEAR SEMINAR:

(Included in General Education course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in General Education course selection)

WRITING ACROSS THE CURRICULUM:

(Included in General Education course selection or REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 95-99 credits

(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses)

PRESCRIBED COURSES: 37 credits

BIOL 110 GN(4)[1], CHEM 110 GN(3)[1], CHEM 111 GN(1), CHEM 112 GN(3)[1], CHEM 113 GN(1), ENGL 202C GWS(3), MATH 140 GQ(4)[1], MATH 141 GQ(4) (Sem: 1-4)
ASTRO 401(4)[1], ASTRO 402(3)[1], BIOL/GEOSC 474(3)[1], STAT 200 GQ(4)[1] (Sem: 5-8)

ADDITIONAL COURSES: 38-39 credits

Select 3 credits from ASTRO 1 GN(3), ASTRO 5 GN(3), ASTRO 6 GN(3), ASTRO 291 GN(3) (Sem: 1-4)
Select 3-4 credits from CMPSC 101 GQ(3), CMPSC 121 GQ(3), CMPSC 201 GQ(3), CMPSC 202 GQ(3), CMPSC 203 GQ(4) (Sem: 1-6)
Select 9 credits from ASTRO 120 GN(3), ASTRO 130 GN(3), ASTRO 140 GN(3), ASTRO 292 GN(3) (Sem: 1-6)
Select 3 credits from EARTH 2 GN(3), GEOSC 1(3), GEOSC 20 GN(3) (Sem: 1-4)
PHYS 211 GN(4) or PHYS 250 GN(4) (Sem: 3-6)
PHYS 212 GN(4) or PHYS 251 GN(4) (Sem: 3-6)
Select 12 credits from EARTH 100 GN(3), EARTH 103 GN(3), EARTH 106 GN(3), EARTH 150 GN(3), EARTH 402(3), GEOG 160 GS(3), GEOSC 201(4), GEOSC 202(4), GEOSC 203(4), GEOSC 204(4), METEO 101 GN(3), METEO 201(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS: 20-23 credits

At least 6 credits from the below categories must be at the 400 level
Select 11 credits in consultation with adviser from department list (Sem: 1-8)
Select 9-12 credits from program list of advanced electives (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-05-146

Review Date: 02/19/2013

Philosophy

University Park, College of the Liberal Arts (PHIL)

PROFESSOR AMY ALLEN, *Head of the Department*

This major provides in-depth study of fundamental issues that inescapably confront all persons. Topics include ethics, social and political philosophy, and esthetics--study of the good life, justice, and beauty; metaphysics, philosophy of mind, and philosophy of religion--study of the nature of reality, mind, body, and the meaning of life and death; epistemology, philosophy of science, and logic--study of the nature of knowledge, truth, objectivity, and principles of sound reasoning; and subjects such as comparative philosophies and world cultures, feminist theory, and philosophical issues in technology, language, education, and the professions of law, business, medicine, communications, engineering, and agriculture. These studies enhance imaginative, interpretive, analytical, critical, and communicative capacities. Majors thus may acquire intellectual abilities crucial for self-fulfillment, responsible participation in public life, and success in a wide range of careers--including law, business, education, journalism, medicine, and public service.

Majors pursued concentration in history of philosophy; humanities and arts; philosophy of science and mathematics; social sciences; the professions; or justice, law, and values. This is combined easily with minors, area studies, and concurrent majors. Qualified students participate in honors study and internships.

For the B.A. degree in Philosophy, a minimum of 124 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

GENERAL PHILOSOPHY OPTION: This option provides students with a concentration in the history of western philosophy and the historical development and impact of philosophical ideas and issues--from the ancient to the contemporary period. It is designed for all students who seek a broad liberal education, including students interested in graduate study in philosophy.

HUMANITIES AND ARTS OPTION: This option provides students with a concentration in philosophical issues in the arts, art history, literature, languages, history and religion. It is designed for all students primarily interested in the philosophical dimensions of the arts, humanities, and cultural studies, including students with career or further educational goals in these fields.

PHILOSOPHY OF SCIENCE AND MATHEMATICS OPTION: This option provides students with a concentration in philosophical issues in the life sciences, the physical sciences, mathematics, engineering, and technology. It is designed for all students primarily interested in the philosophical dimensions of the natural sciences, technology, and mathematics, including students with career or further educational goals in these fields.

SOCIAL SCIENCES OPTION: This option provides students with a concentration in philosophical issues in the social sciences, social and political theory, and education. It is designed for all students primarily interested in the philosophical dimensions of social thought and methodological and normative issues in the social sciences, educational theory, and public policy, including students with career or further educational goals in these fields.

PROFESSIONAL STUDIES OPTION: This option provides students with a concentration in philosophical issues and dimensions in the theory and practice of the professions of agriculture, business, engineering, journalism, law, and medicine and health care. It is designed for all students seeking a foundation in the philosophical dimensions of these professions, including students who wish to combine humanistic study with career or further educational goals in these fields.

JUSTICE, LAW, AND VALUES OPTION: This option provides students with a concentration in philosophical issues in aesthetics, ethics, jurisprudence, and social and political theory, and everyday life. It is designed for students primarily interested in moral, social, political, and legal questions concerning value and is especially appropriate for those anticipating future educational work in law school.

TO VIEW THE [Philosophy Minor \(PHIL\)](#)

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES :
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 25 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 30 credits [\[1\]](#)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 9 credits

ADDITIONAL COURSES: (9 credits)
Select 9 credits in philosophy at the 200 level (Sem: 3-6)

REQUIREMENTS FOR THE OPTION: 21 credits

GENERAL PHILOSOPHY OPTION: 21 credits

PRESCRIBED COURSES (3 credits)
PHIL 12 GQ(3) (Sem: 1-6)

ADDITIONAL COURSES (9 credits)
Select 6 credits in philosophy at the 00 or 100 level (Sem: 1-6)
Select 3 credits from PHIL 200 GH(3), PHIL 201 GH(3), PHIL 202 GH(3), PHIL 203 GH(3), PHIL 204 GH(3) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 9 credits in philosophy at the 400 level, in consultation with adviser (Sem: 5-8)

HUMANITIES AND ARTS OPTION: 21 credits

ADDITIONAL COURSES (12 credits)
Select 3 credits from PHIL 10 GH(3), PHIL 12 GQ(3) (Sem: 1-6)
Select 6 credits in philosophy at the 00 or 100 level (Sem: 1-6)
Select 3 credits from PHIL 401(3), PHIL 402(3-6), PHIL 409(3), PHIL 413(3), PHIL 424(3), PHIL 435(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 6 additional credits in philosophy at the 400 level and 3 credits at the 400 level in a related arts or humanities discipline, in consultation with adviser (Sem: 5-8)

PHILOSOPHY OF SCIENCE AND MATHEMATICS OPTION: 21 credits

PRESCRIBED COURSE (3 credits)
PHIL 12 GQ(3) (Sem: 1-6)

ADDITIONAL COURSES (9 credits)
Select 6 credits in philosophy at the 00 or 100 level (Sem: 1-6)
Select 3 credits from PHIL 407(3), PHIL 410(3), PHIL 425(3), PHIL 426(3-6), PHIL 427(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 6 additional credits in philosophy at the 400 level and 3 credits at the 400 level in a mathematics or natural science discipline, in consultation with adviser (Sem: 5-8)

SOCIAL SCIENCES OPTION: 21 credits

PRESCRIBED COURSE (3 credits)
PHIL 12 GQ(3) (Sem: 1-6)

ADDITIONAL COURSES (9 credits)
Select 6 credits in philosophy at the 00 or 100 level (Sem: 1-6)
Select 3 credits from PHIL 401(3), PHIL 408(3), PHIL 416(3), PHIL 425(3), PHIL 438(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 6 additional credits in philosophy at the 400 level and 3 credits at the 400 level in social science, in consultation with adviser (Sem: 5-8)

PROFESSIONAL STUDIES OPTION: 21 credits

ADDITIONAL COURSES (12 credits)
Select 6 credits in philosophy at the 00 or 100 level (Sem: 1-6)
Select 3 credits from PHIL 10 GH(3), PHIL 12 GQ(3) (Sem: 1-6)
Select 3 credits from PHIL 405(3), PHIL 406(3), PHIL 418(3), PHIL 432(3), PHIL 433(3), PHIL 435(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 9 credits at the 400 level in a professional area outside philosophy, in consultation with adviser (Sem: 5-8)

JUSTICE, LAW, AND VALUES OPTION: 21 credits

PRESCRIBED COURSE (3 credits)
PHIL 105 GH(3) (Sem: 1-6)

ADDITIONAL COURSES (18 credits)
Select 3 credits from PHIL 10 GH(3), PHIL 12 GQ(3) (Sem: 1-6)
Select 3 credits in philosophy at the 00 or 100 level (Sem: 1-6)
Select 3 credits in philosophy at the 400 level (Sem: 5-8)
Select 3 credits from PHIL 403(3), PHIL 405(3), PHIL 406(3), PHIL 407(3), PHIL 408(3), PHIL 418(3), PHIL 425(3), PHIL 432(3), PHIL 433(3), PHIL 438(3) (Sem: 5-8)
Select 6 credits from AFAM 409 US(3), AFAM 465 US(3), CAS 321(3), COMM 403(3), HIST 449 US(3), HIST 450 US(3), LST 370(3), PLSC 403(3), PLSC 412(3), PLSC 415(3), PLSC 424(3), PLSC 431(3), PLSC 432(3), PLSC 470(3), PLSC 471(3), PLSC 472(3), PLSC 474(3), WMNST 423 US(3), WMNST 453 US(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2005

Blue Sheet Item #: 33-06-154

Review Date: 04/12/05

UCA Revision #2: 7/30/07

LA

Dept Head updated: 9/25/15

Physics

University Park, Eberly College of Science (PHYS)

PROFESSOR NITIN SAMARTH, *George A. and Margaret M. Downsbrough Department Head*

This major provides a sound program of technical and general education for students planning a career in physics and related fields. The General option provides broad coverage with the most physics and mathematics course requirements and is useful for students intending to pursue graduate study in Physics or similar disciplines. The Medical and Electronics options incorporate coursework in support of the application of physics and mathematics in various life-science or engineering related fields. A Computation option provides background in the application of physical principles and mathematical methods in the solution of scientific problems, simulations, or visualizations using computer and numerical techniques. The Nanotechnology/Material Science option provides students with background in the understanding of condensed matter physics at either the nano- or micro/macro- levels.

In order to be eligible for entrance to the Physics major, a student must have: 1) attained at least a 2.00 cumulative grade-point average; 2) completed CHEM 110 GN(3), MATH 140 GQ(4), MATH 141 GQ(4), PHYS 211 GN(4), and PHYS 212 GN(4), and earned a grade of C or better in each of these courses.

TO VIEW THE [Physics Minor \(PHYS\)](#)

For the B.S. degree in Physics, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 93-96 credits

(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 69 credits

PRESCRIBED COURSES (59 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#) (Sem: 1-2)
PHYS 211 GN(4) [\[1\]](#), PHYS 212 GN(4) [\[1\]](#), PHYS 213 GN(2) [\[1\]](#), PHYS 214 GN(2) [\[1\]](#), PHYS 237(3) [\[1\]](#) (Sem: 1-4)
ENGL 202C GWS(3), MATH 220 GQ(2), MATH 251(4) [\[1\]](#) (Sem: 3-4)
PHYS 400(4) [\[1\]](#), PHYS 410(4) [\[1\]](#), PHYS 419(3) [\[1\]](#), PHYS 420(3) [\[1\]](#), PHYS 444(2) [\[1\]](#), PHYS 457W(3) [\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (7 credits)

MATH 230(4) [\[1\]](#), or MATH 231(2) [\[1\]](#) and MATH 232(2) [\[1\]](#) (Sem: 3-4)
CMPSC 101 GQ(3) or CMPSC 121 GQ(3) or CMPSC 200 GQ(3) or CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Take 3 credits of 400-level MATH from departmental list (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 24-27 credits

COMPUTATION OPTION: (24 credits)

PRESCRIBED COURSES (9 credits)

CMPSC 122(3) (Sem: 3-4) (Note: CMPSC 122 has CMPSC 121 as a pre-requisite, so care should be taken when choosing the 'programming requirement' under the Common Requirements for the major.)
MATH 455(3), MATH 456(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 6 credits from program list (Sem: 3-6)
Select 3 credits of natural science (GN) courses that are not listed in the major (Sem: 5-6)
Take a total of 6 credits from AERSP 424(3), 300-400-level CMPSC, 400-level MATH from departmental list or 400-level STAT (Sem: 5-8)

ELECTRONICS OPTION: (27 credits)

PRESCRIBED COURSES (4 credits)

EE 210(4) (Sem: 3-6)

ADDITIONAL COURSES (8 credits)

Select 2 of the following 3: EE 310(4), EE 350(4), CMPEN 270(4) (Sem: 4-6)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 6 credits from program list (Sem: 3-6)
Select 3 credits of natural science (GN) courses that are not listed in the major (Sem: 5-6)
Take 6 credits of E E 3XX or 4XX level courses (Sem: 5-8)

GENERAL PHYSICS OPTION: (25-26 credits)

ADDITIONAL COURSES (10-11 credits)

Select 6-7 credits from items a, b, and/or c (Sem: 7-8)
a. PHYS 406(3), PHYS 411(3), PHYS 412(3), PHYS 413(3), PHYS 461(3), PHYS 479(3), PHYS 496(3) or PHYS 497(3)
b. PHYS 402(4) or PHYS 458(4) (the course not selected below may be used)
c. ASTRO 410(3), ASTRO 440(3), or ASTRO 485(3) (only 3 credits of ASTRO courses may be used)
Select 4 credits from PHYS 402(4) or PHYS 458(4) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 3 credits of natural science (GN) courses that are not listed in the major (Sem: 3-8)
Select 9 credits from program list; a maximum of 6 of the 12 credits may be from PHYS 496(1-18), SC 295(1-9), SC 395(1-9), or SC 495(1-9) (Sem: 3-8)
Select 3 credits of 4XX-level MATH from program list (Sem: 7-8)

MEDICAL PHYSICS OPTION: (24-25 credits)

This option prepares students for graduate study in medical physics, medical school, or bioengineering. The courses in option (b) below help satisfy the requirements for a minor in Bioengineering. Application for the BIOE minor must be made to the Department of Bioengineering.

ADDITIONAL COURSES (15-16 credits)

Select from the following two sets of courses:

(a) BIOL 110 GN(4), and BIOL 240W GN(4), CHEM 210(2), CHEM 212(3), CHEM 213(3) (Sem: 3-8)

(b) BMB 251(3) or BIOL 230W GN(4) or BME 201(3); BIOL 141 GN(3) or BIOL 472(3); 9 credits of BIOE at the 300 or 400 level (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from program list; a maximum of 6 of the 9 credits may be from PHYS 496(1-18), SC 295(1-9), SC 395(1-9) or SC 495(1-9) (Sem: 5-8)

NANOTECHNOLOGY/MATERIAL SCIENCE OPTION: (24-25 credits)

PRESCRIBED COURSES (3 credits)

PHYS 412(3) (Sem: 7)

ADDITIONAL COURSES (12-13 credits)

The courses in option (a) help satisfy the requirements for the Nanotechnology minor.

Select from the following two sets of courses:

(a) ESC 312(3), ESC 313(3) and select 6 credits from ESC 400-level courses

(b) MATSE 201(3), MATSE 430(3), MATSE 460(1); MATSE 402(3) or MATSE 436(3); select 3 credits from MATSE 400-level courses (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 6 credits from program list (Sem: 3-6)

Select 3 credits of natural science (GN) courses that are not listed in the major (Sem: 5-6)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-096

Review Date: 04/09/2013

[Comments](#)

SC

Physics

Penn State Erie, The Behrend College (PHYBD)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

The major provides education in the fundamentals of physics and selected advanced topics to prepare graduates for graduate education or for careers in industry. Students have opportunities to participate in research with faculty. In addition to the traditional physics education offered in the General physics option, the option in applied physics, Computational Physics, provides preparation for careers in technological fields.

To be eligible for entrance to the Physics major, a student must have: 1) attained at least a 2.00 cumulative grade-point average; 2) completed CHEM 110 GN(3), MATH 140 GQ(4), MATH 141 GQ(4), PHYS 211 GN(4), and PHYS 212 GN(4), and earned a grade of C or better in each of these courses.

For the B.S. degree in Physics, a minimum of 122 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selections)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 1 credit

REQUIREMENTS FOR THE MAJOR: 94 credits
(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 66 credits

PRESCRIBED COURSES (66 credits)

CHEM 110 GN(3)[1], CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4)[1], MATH 141 GQ(4)[1] (Sem: 1-2)

PHYS 211 GN(4)[1], PHYS 212 GN(4)[1], PHYS 213 GN(2)[1], PHYS 214 GN(2)[1], PHYS 237(3)[1] (Sem: 1-4)

CMPSC 121 GQ(3), ENGL 202C GWS(3) (Sem: 3-4)

MATH 220 GQ(2-3), MATH 230(4), MATH 251(4), PHYS 400(3), PHYS 419(3), PHYS 420(3), PHYS 421(3), PHYS 458(4), PHYS 494(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 28 credits

COMPUTATIONAL PHYSICS OPTION: (28 credits)

PRESCRIBED COURSES (10 credits)

CMPSC 122(3) (Sem: 1-8)

MATH 455(3), PHYS 402(4) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)

Select 3 credits from CMPSC 459(3), CMPSC 465(3), or CMPSC 474(3) (Sem: 5-8)

Select 12 credits from EE 352(4), EE 450(3), EE 453(3), MATH 456(3), ME 410(3), ME 428(3), PHYS 410(3), PHYS 414(3), PHYS 446(I), PHYS 494(1-3), and/or PHYS 495(1-3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits from a school-approved list (Sem: 1-8)

GENERAL PHYSICS OPTION: (28 credits)

PRESCRIBED COURSES (3 credits)

PHYS 410(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 12 credits from MATH 421(3), MATH 455(3), MATH 456(3), PHYS 402(4), PHYS 414(3), PHYS 446(I), PHYS 494(1-3), and/or PHYS 495(1-3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (13 credits)

Select one of the following two sequences:

a. Select 8 credits of a foreign language (Proficiency demo by examination or course work to the level of the second semester in a foreign language is required. If fewer than 8 credits are needed to reach the required proficiency, students choose selections from a school-approved list to make a total of 8 credits.) (Sem: 1-8)

Select 5 credits from a school-approved list (Sem: 1-8)

b. CMPSC 122(3) (Sem: 1-8)

Select 3 credits from CMPSC 459(3), CMPSC 465(3), or CMPSC 474(3) (Sem: 1-8)

Select 7 credits from a school-approved list (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2010

Blue Sheet Item #: 38-04-003

Review Date: 01/12/2010

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

BD

Political Science

Altoona College (PLSAL)
 Capital College (PLSCA)
 University Park, College of the Liberal Arts (PL SC)
 World Campus

PROFESSOR LEE ANN BANASZAK, Head, University Park
 PROFESSOR MATTHEW EVANS, Penn State Altoona
 PROFESSOR ALEXANDER SIEDSCHLAG, Capital College

The Political Science major offers the student an opportunity to understand not only American federal, state, and local governments, but also the political systems of other nations and the philosophies that underlie them. Courses are offered in American, comparative, and international politics, and in political theory and methodology. Internship opportunities are available.

For the B.A. degree in Political Science, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
 (See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
 (Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
 (Included in ELECTIVES, GENERAL EDUCATION course selections, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
 (Included in ELECTIVES, GENERAL EDUCATION course selections, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
 (3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
 (See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits^[1]

SUPPORTING COURSES AND RELATED AREAS (36 credits)
 (In meeting these requirements, students must take at least one course at any level from the four fields offered in the department: Political Theory/Methodology, American Politics/Public Administration, Comparative Politics, and International Relations)
 Select 12 credits from below the 400 level (Sem: 1-6)
 Select 15 credits from the 400 level and above in political science (Sem: 3-8)
 Select 9 credits in political science or in related disciplines from departmental list of approved courses. Substitutions may be made with the written permission of the faculty adviser. (Sem: 3-8)

Integrated Undergraduate/Graduate (IUG) Degree Program B.A. in Political Science and Master's in International Affairs (M.I.A.)

The integrated undergraduate-graduate (IUG) degree program (B.A. in Political Science/M.I.A. in International Affairs) will provide an opportunity for strong students in Political Science to complete a Master's degree with 5 total years of study.

An increasingly globalized economy is likely to escalate the demand for graduate training in international affairs. The career choices for graduates with this training will also expand sharply. The integrated degree program would prepare students for a variety of careers requiring an interdisciplinary background in politics and international affairs. Examples of types of entities hiring in these areas are federal, state, and local governments, international organizations, multinational corporations, international banking and financial institutions, media organizations and journalism, consulting firms, policy research centers, and development assistance programs and foundations. The School of International Affairs (SIA) Master's in International Affairs (M.I.A.) represents a professional degree designed to prepare students to thrive in these increasingly global career paths.

The IUG degree in International Affairs and Political Science is both timely and consistent with the tradition of interdisciplinary studies at other schools of international affairs. It will also strengthen the School of International Affairs' existing collaborations and interactions with the College of the Liberal Arts.

Admission Requirements

The number of openings in the integrated B.A./M.I.A. program is limited. Admission will be selective based on specific criteria set by the School of International Affairs. Students shall be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study. Specific requirements:

1. Must be enrolled in the Political Science B.A. program.
2. Must apply to and be accepted into The Graduate School and the M.I.A. program in the School of International Affairs. Students must complete the [Graduate School application](#). All applicants will submit GRE scores, two letters of recommendation and a personal statement addressing their reasons for pursuing a graduate degree in international affairs and discussing their plans and goals.
3. Although the program has no fixed minimum grade-point average, an applicant is generally expected to have a minimum overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
4. Must include a plan of study identifying undergraduate credits to be applied to the M.I.A. degree elective requirements.
5. Must provide written endorsement from the head of Political Science.

M.I.A. Requirements for the Integrated B.A./M.I.A.

M.I.A. portion of the integrated B.A./M.I.A. will require the completion of a **minimum of 42 credits at the 400 level or higher**, at least 18 of which are from six core courses consisting of INTAF 801(3), 802(3), 803(3), 804(3), 506(3) and INTAF 590(3). The remaining credits are attained through completion of the approved elective courses.

In addition to the core curriculum and elective courses, M.I.A. degree candidates must complete either: (i) a master's paper; or (ii) a supervised internship placement. If the first option is chosen and the candidate opts to complete a paper, he/she must complete 3 credits of INTAF 594. The master's paper will involve integrating and showing mastery of the subject matter of the student's curricular emphasis, and may also involve original research. If the second option is chosen, the candidate will complete 3 credits of INTAF 595. The student will participate in a supervised internship of sufficient depth and professionalism that will allow the student to experience the integration of his/her curricular studies in an actual professional environment. A reflective paper will be submitted as a part of this credit requirement.

In order to graduate, M.I.A. degree students also will need to demonstrate proficiency in a language other than English. Proficiency will be defined as follows: (i) four semesters of a Penn State language sequence or its equivalent (15 credits with a quality grade of C or better using a 4.0 scale); (ii) native acquisition, as shown by the candidate's personal history and approved by the SIA faculty; or (iii) performance on a proficiency evaluation sufficient to equal four semesters of language learning: for this purpose, either Penn State's proficiency certification process or another pre-approved proficiency assessment

may be used. Language study does not provide credits towards the degree.

M.I.A Degree Core Courses (18) INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3) Electives (21) Course choices are from a pre-approved list in the SIA, or by SIA faculty approved substitution Capstone (3) Master's Paper (INTAF 594) or Internship (INTAF 595) Total Degree Credits (42)	Integrated B.A./M.I.A. Degree Core Courses (18) INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF 590(3) Electives (21) The following 12 credits may be double counted toward the B.A. and the M.I.A.: PLSC 415(3), PLSC 441(3), PLSC 550(3), PLSC 554(3). Capstone (3) Master's Paper (INTAF 594) or Internship (INTAF 595) Total Degree Credits (42)
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Sample Program of Study

A typical sequence of coursework for a student in the IUG program would appear as follows:

Year One:	Political Science	PLSC 1; PLSC 14 or PLSC 3
Year Two:	Political Science	PLSC 3 or PLSC 20; 400-level course
Year Three:	Political Science	400 level PLSC class; PLSC 7 or PLSC 17; related course
Year Four:	Fall Semester	INTAF 801, INTAF 802 and INTAF 803 are required. Additional 400-level PLSC, related course(s), or HIST/GEOG/Economics course(s) may be taken.
	Spring Semester	INTAF 804, INTAF 506 and INTAF 590 are required. Additional 400-level PLSC, related course(s), or HIST/GEOG/Economics course(s) may also be taken.
Year Five:	24 credits	The following 12 credits may be double counted toward the B.A. and the M.I.A.: PLSC 415(3), PLSC 441(3), PLSC 550(3), PLSC 554(3).

Tuition Charges, Grant-in-Aid and Assistantships

Students admitted to the School of International Affairs through the IUG with Political Science may be considered to receive financial assistance.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-03-079

Review Date: 11/19/2013

LA

Date department head updated by Publications: 4/20/10

Plant Sciences

University Park, College of Agricultural Sciences (PLANT)

PROFESSOR Erin L. Connolly, Head, *Department of Plant Science*

The Plant Sciences Major is an applied biological science program designed for students seeking careers in agronomic and horticultural crop production systems and enterprise management, agroecology, sustainable and organic managed and natural ecosystems, crop protection, applied plant physiology, plant science research, and plant biotechnology. Students will secure: (1) a working knowledge of basic plant biology, soils, pests, and pathogens with emphasis on growth, development, and physiology in an ecological and agricultural context, (2) the scientific, technical, and computational approaches to problem solving in an ecological and agricultural context, individually and in teams, (3) the ability to analyze ethical issues regarding ecosystem sustainability, business practices and plant science, and critically evaluate and respect different viewpoints in making management decisions, and (4) a high level of proficiency in written and oral communication, particularly with regard to critical evaluation of scientific issues.

There are five options in the major, providing flexibility for concentrations in areas including production and management systems related to agronomic and horticultural crops, plant biotechnology and breeding, crop physiology, ecology, agroecology, and other aspects of general plant science. Students can choose from diverse course offerings in designing a program of study suited to their needs and professional goals.

AGROECOLOGY OPTION:

This option applies an ecological approach to understanding and managing cropping systems to meet societies' needs while enhancing environmental protection and resource conservation. Students will develop skills to manage agroecosystems for sustainable productivity, profitability and environmental protection by studying plant and soil sciences, ecology, and pest management from a systems perspective. The curriculum prepares students for a wide range of careers in agricultural and ecological fields, sustainable food production, and for graduate studies.

CROP PRODUCTION OPTION:

This option provides students with practical and field-related skills in Agronomy (field crop production and soil management). Students will focus on techniques and knowledge necessary to efficiently and economically manage soils, crops and other farm resources with additional emphasis on pest management and commodity marketing. Courses stress the skills and information needed to work with current production technologies such as seed traits, crop protection chemicals, and fertilizers to improve yield and productivity.

HORTICULTURE OPTION:

This option prepares students to enter the horticultural industry by providing a broad background in courses related to production and physiology of horticultural crops. Additional courses in pest management and business are required. Graduates may work as orchard, greenhouse, garden center, nursery or farm managers, with horticultural and landscape service providers, suppliers, and brokers, with cooperative extension and other government and non-governmental agencies and public and private gardens, or continue with graduate studies.

PLANT GENETICS AND BIOTECHNOLOGY OPTION:

This option is a combination of basic science and technology-based classes designed for students who are seeking careers in agricultural sciences, plant breeding, plant molecular genetics and plant biotechnology based industries. It provides students with maximum flexibility in selecting a program of study suited to their needs and to achieve professional goals related to advanced degrees or immediate job placement in the industry. The option provides theoretical and practical skills of plant genetic manipulation relevant to plant biotechnology, plant breeding and genome research.

PLANT SCIENCE OPTION:

This option emphasizes the application of the biological sciences to problem-solving in agronomic and horticultural ecosystems. Topic areas include plant biology, plant pathology, plant microbiology, plant biotechnology, plant-insect interactions, horticulture, crop science, plant ecology, and bioenergy. Graduates may find employment in industry, government and academic research programs as technicians and research assistants, or pursue graduate degrees.

For the B.S. Degree in Plant Sciences, a minimum of 120 credits are required.

GENERAL EDUCATION: 45 credits

(21-24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE OPTIONS)

ELECTIVES: 0-13 credits

REQUIREMENTS FOR THE MAJOR: 83-102 credits

(This includes 21-24 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses and 3 credits of GWS courses; plus 3 GH in Crop Production.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 33-36 credits

PRESCRIBED COURSES (19 credits)

BIOL 110 GN(4), CHEM 110 GN(3), CHEM 111 GN(1) (Sem: 1-4)

SOILS 101 GN(3) [11](#), ENT 313(2) (Sem: 5-6)

AGECO 457(3) [11](#), PLANT 461(3) [11](#) (Sem: 5-8)

ADDITIONAL COURSES (14-17 credits)

Select 3-5 credits from MATH 22 GQ(3), MATH 26 GQ(3), MATH 40 GQ(5), MATH 41 GQ(3-4), MATH 110 GQ(4), MATH 111 GQ(2), MATH 140 GQ(4), MATH 141 GQ(4), or MATH 141B GQ(4) (Sem: 1-2)

Select 3-4 Credits from STAT 200 GQ(4), STAT 240 GQ(3) or STAT 250 GQ(3) (Sem: 1-2)

Select 3 credits from ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 1-4)

Select 3 credits from AGBM 101 GS(3), ECON 14 GS(3), ECON 102 GS(3), or ECON 104 GS(3) (Sem: 3-4)

Select 1 credit from ENT 314(1) or ENT 316(1) (Sem: 5-7)

Select 1 credit from AGECO 495(1-18), AGRO 495(1-5), HORT 495(1-13), or HORT 496(1-18) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 50-66 credits

AGROECOLOGY OPTION: (60-61 credits)

PRESCRIBED COURSES: (18 credits)

SOILS 102(1) (Sem: 1-5)

AGECO 201(3) [11](#) (Sem: 2-6)

AGECO 295(1) (Sem: 2-8)

AGECO/AGRO 438(4) (Sem: 5-7)

SOILS 401(3), SOILS 402(3) (Sem: 6-8)

PPM 405(3) (Sem: 6-8)

ADDITIONAL COURSES (24-25 credits)

Select 3 credits from AGECO/METEO 122 GN(3), AGECO 134 GN(3), AGECO 144 GN(3), AGECO 154(2) or AGECO 496(1) (Sem: 1-4)

Select 3 credits from AG 160 GH(3), GEOG 30 GS;IL(3), PHIL 13 GH(3), PHIL 103 GH(3), or PHIL 132/RLST 131 GH(3) (Sem: 1-4)

Select 3 credits from AGRO 28(3) [11](#) or HORT 101 GN(3) [11](#) (Sem: 1-5)

Select 3 credits from AGECO 121 GN(3) or BIOL 127 GN(3) (Sem: 3-5)

Select 6 credits from AGRO 423(3), AGRO 425(3), HORT 202(3), HORT 315(3), HORT 431(3), HORT 432(3), HORT 433(3), HORT 450(3), or SOILS 418(3) (Sem: 5-6)

Select 3 credits from BIOL 222(3) or HORT 407(3) (Sem: 5-6)

Select 3-4 credits from AGRO 410(4), HORT 412(3), or SOILS 412W(3) (Sem: 6)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 18 credits of supporting courses in consultation with adviser. (Sem: 5-8)

CROP PRODUCTION OPTION: (64-66 credits)

PRESCRIBED COURSES (32 credits)

SOILS 102(1) (Sem: 2-5)

AGECO 201(3)[\[1\]](#), AGECO 295(1) (Sem: 2-6)

PPEM 405(3) (Sem: 3-7)

AGECO 429(2), AGRO 423(3), AGRO 425(3) (Sem: 3-8)

AGECO/AGRO 438(4) (Sem: 5)

HORT 407(3) (Sem: 5-7)

SOILS 401(3), SOILS 402(3) (Sem: 6-8)

PPEM 405(3) (Sem: 6-8)

ADDITIONAL COURSES (23-25 credits)

Select 3 credits from AGRO 28(3)[\[1\]](#) or HORT 101 GN(3)[\[1\]](#) (Sem: 1-3)

Select 3 credits from AG 160 GH(3), PHIL 13 GH(3), PHIL 103 GH(3), or PHIL 132 GH(3) (Sem: 2-7)

Select 3 credits from AGECO 121 GN(3) or BIOL 127 GN(3) (Sem: 3-5)

Select 3 credits from AGBM 102(3), AGBM 106(3), AGBM 200(3) or AGBM 407(3) (Sem: 3-7)

Select 3 credits from AEE 201 GS(3), AEE 360(3), AEE 460(3), or AEE 465(3) (Sem: 3-7)

Select 2 credits from AGECO 154(2) or SOILS 403(2) (Sem: 3-8)

Select 3-4 credits from AGECO/ANSC/SOILS 418(3), ANSC 201(4), GEOG 160 GS(3), or SOILS 450(3) (Sem: 3-8)

Select 3-4 credits from AGRO 410(4), HORT 412(3), or SOILS 412W(3) (Sem: 6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits of supporting courses in consultation with adviser (Sem: 4-8)

HORTICULTURE OPTION: (54-57 credits)

PRESCRIBED COURSES (30 credits)

HORT 101 GN(3)[\[1\]](#), HORT 202(3)[\[1\]](#), HORT 232(3), HORT 315(3)[\[1\]](#), HORT 402(3), HORT 407(3), HORT 412(3)[\[1\]](#), HORT 420(3), HORT 445(3), HORT 455(3) (Sem: 1-8)

ADDITIONAL COURSES (24-27 credits)

Select 3 credits from HORT 131(3), HORT 137(3), HORT 138(3), HORT 431(3)*, HORT 432(3)*, or HORT 433(3)* (Sem: 3-8)

Select 3 credits from PPEM 300(3) or PPEM 405(3) (Sem: 4-8)

Select 6-7 credits from HORT 408(4), HORT 431(3), HORT 432(3), HORT 433(3), HORT 450(3), or HORT 453(3) (Sem: 5-8)

Select 3-4 credits from AGRO 438(4) or HORT 238(3) (Sem: 5-8)

Select 9-10 credits from AGBM 200(3), AGBM 407(3), BLAW 243(3), BA 301(3), BA 303(3), SPAN 1(4), SPAN 2(4), SPAN 3(4) or SPAN 105(4) (Sem: 5-8)

PLANT GENETICS AND BIOTECHNOLOGY OPTION: (59-65 credits)

PRESCRIBED COURSES (37 credits)

PHYS 250(4) (Sem: 3-4)

BIOL 127(3)[\[1\]](#), BIOL 222(3) (Sem: 3-5)

CHEM 112 GN(3), CHEM 210(3) (Sem: 4-5)

PPEM 405(3)[\[1\]](#) (Sem: 5)

CHEM 212(3) (Sem: 5-6)

HORT 407(3) (Sem: 5-7)

AGRO 410(4), HORT/BIOL/BIOTC 459(3) (Sem: 6)

BMB 400(2) (Sem: 7)

AGRO/BIOTC 460(3) (Sem: 8)

ADDITIONAL COURSES (22-28 credits)

Select 3 credits from AGRO 28(3) or HORT 101 GN(3) (Sem: 1-4)

Select 1 credit from CHEM 113 GN(1); CHEM 113B GN(1) (Sem: 2-3)

Select 4-6 credits from BIOL 230W GN(4); BIOL 240W GN(4); BMB 211(3) and BMB 212(1); MICRB 201(3) and MICRB 202(2); MICRB/BMB 251(3) and MICRB/BMB 252(3) (Sem: 4)

Select 3-4 credits from BIOL 412(3), BIOL 414(3), BIOL 427(3), BIOL 428(3), BIOL 436(3), BIOL 448(3), ENT 420(3), HORT 445(3), or PPEM/BIOL 425(4) (Sem: 7)

Select 2-3 credits from BIOL 439(3), BIOTC 479 (3), HORT 497(3), MCIBS 571(2), or MCIBS 593(3) (Sem: 7)

Select 3-4 credits from ENT/VBSC 402(3), ENT 410(3), PPEM 416(3), or PPEM/BIOL 425(4) (Sem: 8)

Select 3-4 credits from BIOL 407(3), BIOL 424(3), BIOL 441(3), HORT 402(3), HORT 412(3), HORT 420(3), MCIBS 591(1), PPEM 417W(3), or PPEM/ERM 430(3) (Sem: 8)

Select 3 credits from AGRO 423(3), AGRO 425(3), HORT 202(3), HORT 315(3), HORT 431(3), HORT 432(3), HORT 433(3), HORT 450(3), or

SOILS/AGECO/ANSC 418(3) (Sem: 8)

PLANT SCIENCE OPTION: (50-56 credits)

PRESCRIBED COURSES (24 credits)

CHEM 112(3) (Sem: 2-3)

BIOL 127 GN(3)[\[1\]](#), PHYS 250(4) (Sem: 3-6)

CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 4-5)

BIOL 222(3) (Sem: 5-6)

PPEM 405(3)[\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (26-32 credits)

Select 3 credits from AGRO 28(3) or HORT 101 GN(3) (Sem: 1-4)

Select 1 credit from CHEM 113(1) or CHEM 113B(1) (Sem: 2-3)

Select 4-6 credits from BMB 211(3) and BMB 212(1), or BIOL 230W GN(4), or BIOL 240W GN(4), or MICRB 201(3) and MICRB 202(2), or MICRB 251(3), or MICRB 252(3) (Sem: 3-6)

Select 3-4 credits from BIOL 439*(3), ENT 402(3), ENT 410(3), PPEM 416(3), PPEM 417W*(3), or PPEM 425*(4) (Sem: 5-8)

Select 3-4 credits from BIOL 412(3), BIOL 414(3), BIOL 427(3), BIOL 428(3), BIOL 436(3), BIOL 448(3), ENT/VBSC 402(3), ENT 420(3), HORT 445(3), PPEM 425(4) (Sem: 5-8)

Select 3 credits from AGRO 460(3), BIOL 439(3), HORT 407*(3), or HORT 459(3) (Sem: 5-8)

Select 6-7 credits from AGRO 410(4), AGRO 460(3), BIOL 407(3), BIOL 441(3), BIOL 424(3), HORT 402(3), HORT 407*(3), HORT 412(3), HORT 420(3), PPEM 417W*(3), or PPEM/ERM 430(3) (Sem: 5-8)

Select 3-4 credits from AGRO 410(4), HORT 412(3), or SOILS 412W(3) (Sem: 6)

*Students cannot use the same course more than once as an additional course

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-005

Political Science

University Park, College of the Liberal Arts (PLSBS)
World Campus

Professor Lee Ann Banaszak, *Head, Department of Political Science*

The Bachelor of Science Degree in Political Science emphasizes the technical aspects of political science knowledge development and application. In addition to broad coursework in political science, students will complete courses in statistics and research design, advanced classes in social science methods and upper level political science courses that employ quantitative research skills in exploring substantive themes. Students have the opportunity to complete either a research practicum within the Political Science Department, an internship or a TA-ship. This degree will serve students who are interested in political science from the point of view of the practitioner, as well as those who are interested in acquiring practical skills relevant to a variety of careers in politics, government and business.

For the B.S. degree in Political Science, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR) (See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES (19-20 credits)

REQUIREMENTS FOR THE MAJOR: 67-68 credits [1]

(This includes 12 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (6 credits)

PLSC 197 GS(3), PLSC 309(3) (Sem: 1-4)

ADDITIONAL COURSES (49-50 credits)

Select 4 credits from MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-4)

Select 9 credits from PLSC 1 GS(3), PLSC 3 GS;IL(3), PLSC 7 GS(3), PLSC 14 GS;IL(3), PLSC 17 GS(3)(Sem: 1-4)

Select 3-4 credits from CMPSC 101 GQ(3), CMPSC 203 GQ(4), CMPSC 121 GQ(3) (Sem: 1-4)

Select 3 credits from PLSC 308(3) or PLSC 300(3) (Sem: 3-7)

Select 9 credits of data intensive PLSC courses from a department list. (Sem: 3-8)

Select 9 credits of any 400-level PLSC course (Sem: 3-8)

Select 9 credits of methodology from PLSC 410(3), GEOG 363(3), GEOG 364(3), STAT 461(3), STAT 462(3), STAT 463(3), STAT 380(3), STAT 466(3) and

courses from a department approved list. (Sem: 4-8)

Select 3 credits of 494, 496 or data intensive course from a department list (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from department approved list of courses. Students can take a range of courses across disciplines or concentrate their selection to complete a minor in a supporting field. (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-100

Review Date: 04/14/2015

Plastics Engineering Technology

Penn State Erie, The Behrend College (PLTBD)

This major prepares graduates with the knowledge and skills needed to provide high level engineering technology support to a wide variety of industrial, developmental, commercial, consulting, and sales organizations dealing with the development, manufacture and/or distribution of plastics related products, materials and technologies. The program emphasizes the integration of engineering and scientific principles, practical hands-on experience, application of state-of-the-art computer technologies, and management methods.

Entrance to Major Requirements:

To be eligible for entrance to the Plastics Engineering Technology major, a student must have: 1) attained at least a 2.00 cumulative grade-point average; 2) completed MATH 81 or MATH 26, and MATH 82 or MATH 22, and MATH 83 or MATH 140, and PHYS 250, and earned a grade of C or better in each of these courses.

Graduates are qualified for positions in product development, part design, tooling design, R&D, processing, plant engineering, production control, technical sales and marketing in the plastics industry, and are provided a path to a wide variety of graduate degrees in engineering, science or business.

The four-year baccalaureate program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org. Graduates of the Penn State University associate degree program in Mechanical Engineering Technology may complete this degree in five semesters of full-time study.

For the B.S. degree in Plastics Engineering Technology, a minimum of 134 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 1 credit

REQUIREMENTS FOR THE MAJOR: 106 credits

(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses.)

PRESCRIBED COURSES (82 credits)

CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), EGT 120(3), EGT 121(3), PHYS 250 GN(4) [\[1\]](#), PLET 50(2) [\[1\]](#) (Sem: 1-2)
MCHT 111(3) [\[1\]](#), MCHT 213(3) [\[1\]](#), PLET 205(3) [\[1\]](#), PLET 206(3) [\[1\]](#), PLET 222(4) [\[1\]](#), PLET 227(4) [\[1\]](#), PLET 232(3) [\[1\]](#), PLET 235(2) [\[1\]](#) (Sem: 3-4)
ENGL 202C GWS(3) [\[1\]](#), MATH 211 GQ(3), MET 418(3) [\[1\]](#), MGMT 409(3) [\[1\]](#), PLET 304(3) [\[1\]](#), PLET 323(3) [\[1\]](#), PLET 330(4) [\[1\]](#), PLET 345(2) [\[1\]](#), PLET 350(4) [\[1\]](#),
PLET 366(3) [\[1\]](#), PLET 494A(3) [\[1\]](#) (Sem: 5-6)
PLET 425(2) [\[1\]](#), PLET 477(2) [\[1\]](#), PLET 481(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (15 credits)

MATH 26 GQ(3) [\[1\]](#) or MATH 81 GQ(3) [\[1\]](#), MATH 22 GQ(3) [\[1\]](#) or MATH 82 GQ(3) [\[1\]](#), MATH 83 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#), MATH 210 GQ(3) [\[1\]](#) and two credits of GN electives; or MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#), 2 credits of GN electives, and 5 credits of general electives (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select a total of 9 credits of technical electives from School-approved list. (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-03-006

Review Date: 11/19/2013

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

BD

Petroleum and Natural Gas Engineering

University Park, College of Earth and Mineral Sciences (PNG E)

PROFESSOR Russell Johns, Undergraduate Program Chair

The B.S. program in Petroleum and Natural Gas Engineering is accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012; telephone: 410-347-7700.

The undergraduate curriculum in petroleum and natural gas engineering has been designed to equip the student with the fundamentals necessary to achieve lifelong professional growth. Graduates are prepared to enter both the private and public sectors as petroleum and natural gas engineers or to pursue further education at the graduate level.

The courses are structured to serve as a melting pot for theory, application to case studies and engineering project design. This enables the student to appreciate and understand that a successful engineering design project requires a sound theoretical foundation, experimentation and engineering judgment. The thrust of the program structure emphasizes the fundamentals of mathematics and earth and engineering sciences and integrates them in application to traditional petroleum and natural gas engineering topics. Design projects are required throughout the curriculum. Execution of these projects requires an amalgamation of problem formulation strategies, testing of alternative design methodologies, feasibility studies, and economic and environmental considerations. Graduates of the program are expected to perform in various facets of the petroleum industry including drilling, production, evaluation, transportation and storage. The petroleum and natural gas engineering faculty and staff are committed to an interactive teaching and learning environment to ensure that the student is an active participant in the learning process. General education opportunities are sufficiently broad and diverse in scope to enable the student to tailor the educational experience to particular interests, background and expected role in society.

Petroleum and Natural Gas Engineering Student Outcomes:

1. Our students, at the time of their graduation, will have a working knowledge of basic math, science skills and engineering skills.
2. Our students, at the time of their graduation, will be equipped with ability to design and conduct experiments as well as to analyze and interpret data.
3. Our students, at the time of their graduation, will be ready to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability.
4. Our students, at the time of their graduation, will be able to function in multi-disciplinary teams.
5. Our students, at the time of their graduation, will be equipped with the necessary skills to identify, formulate and solve engineering problems.
6. Our students, at the time of their graduation, will have a thorough understanding of professional and ethical responsibilities.
7. Our students, at the time of their graduation, will be equipped with the necessary communication skills to communicate effectively.
8. Our students, at the time of their graduation, will have a broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context.
9. Our students, at the time of their graduation, will be instilled with the recognition of the need for, and an ability to engage in life-long learning.
10. Our students, at the time of their graduation, will attain knowledge on contemporary issues.
11. Our students, at the time of their graduation, will have an ability to use the techniques, skills and modern engineering tools that are necessary for engineering practice.

Petroleum and Natural Gas Engineering Program Educational Objectives:

1. Our graduates will integrate key science and engineering principles to address the technological challenges of the petroleum and natural gas industry.
2. Our graduates will practice in a broad range of petroleum engineering fields working on teams that create innovative solutions to the most pressing problems of the petroleum and natural gas industry by implementing the ideals of ethical behavior, professionalism, and environmental sensitivity and social awareness.
3. Our graduates will be recognized as critical and independent thinkers and will assume positions of leadership in defining the social, intellectual, business and technical dimensions of the professional organizations they belong to.
4. Our graduates will continue their life-long learning process and participate in graduate education to remain as effective professionals in the workplace of the future.

ENTRANCE TO MAJOR-- (Effective for students admitted beginning Summer 2013) -- In the event that the major is under enrollment control, a higher minimum cumulative grade-point average (GPA) than the minimum described by University Policies is likely to be needed. In addition to this minimum grade point average requirement, the following entrance to major requirements must also be completed with a minimum grade of C: CHEM 110 (GN)(3) [1], CHEM 112 (GN)(3)[1], MATH 140 (GQ)(4)[1], MATH 141 (GQ)(4)[1], and PHYS 211 (GN)(4)[1]. These courses must be completed by the end of the semester during which the entrance to major process is carried out. To be eligible for consideration for entrance to this major, students must be enrolled in the College of Earth and Mineral Sciences or Division of Undergraduate Studies at the time that they confirm their major choice.

Integrated B.S. in Petroleum and Natural Gas Engineering (PNG E) and M.S. in Energy and Mineral Engineering (EME)

The integrated undergraduate-graduate (IUG) program between the Petroleum and Natural Gas Engineering undergraduate program and the Energy and Mineral Engineering graduate program enables academically superior and research-focused PNG E undergraduate students to also obtain an M.S. degree in Energy and Mineral Engineering in five years of study. Students should refer to the Energy and Mineral Engineering graduate program in the Graduate Program Bulletin for the IUG admission and degree requirements.

(http://bulletins.psu.edu/bulletins/whitebook/graduate_degree_programs.cfm?letter=E&program=grad_eme.htm)

For the B.S. degree in Petroleum and Natural Gas Engineering, a minimum of 129 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(30 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 114 credits

(This includes 30 credits of General Education courses: 3 credits of GH courses; 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (99 credits)

CHEM 110 GN(3) [1], CHEM 111 GN(1), CHEM 112 GN(3) [1], ECON 102 GS(3), EMSC 100S GWS(3) [88] (Sem: 1-2)

MATH 140 GQ(4) [1], MATH 141 GQ(4) [1], MATH 230(4), MATH 251(4), PHYS 211 GN(4) [1], PHYS 212 GN(4) [1], PHYS 213 GN(2) (Sem: 1-4)

EMCH 210(5) [77], EMCH 212(3), GEOSC 1(3) (Sem: 3-4)

EME 301(3) [1], EME 303(3) [1], EME 460(3), GEOSC 454(3), PNG 405(3) [1], PNG 406(1) [1], PNG 410(3) [1], PNG 450(3) [1], PNG 451(1) [1], PNG 475(3) [1], PNG 490(1) (Sem: 5-6)

ENGL 202C GWS(3), PNG 420(4), PNG 425(3), PNG 430(3), PNG 440(3), PNG 480(3), PNG 482(1), PNG 491(1), PNG 492(1) (Sem: 7-8)

ADDITIONAL COURSES (9 credits)

Select 9 credits: one course from categories a, b, and c.

a. ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)

b. PHIL 103 GH(3), PHIL 106 GH(3), PHIL 107 GH(3), or PHIL 233 GH(3) (Sem: 3-4)

c. CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in consultation with adviser (Students may apply 6 credits of ROTC.) (Sem: 7-8)

Course Substitutions for the Integrated B.S. in Petroleum and Natural Gas Engineering (PNG E) and M.S. in Energy and Mineral Engineering (EME)

As many as twelve of the credits required for the master's degree may be applied to both the B.S. and M.S. degrees. A minimum of six credits counted for both the B.S. and M.S. degrees must be at the 500-level. Thesis and culminating/capstone experience credits may not be double counted. The undergraduate degree program officer will determine the specific undergraduate required courses for which the 500-level courses may be used to substitute to meet institutional and accreditation requirements.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[77] Students at commonwealth campuses and/or transfer students can substitute the combination of EMCH 211 and EMCH 213.

[88] The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 GWS can be substituted for EMSC 100S GWS.

R & T: Approved 5/24/2013

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-029

Review Date: 08/20/13

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

EM

Political Science

Penn State Erie, The Behrend College (POLSC)

The discipline of political science consists of different related subfields such as American government, international relations, public policy and administration, the study of how governments accomplish objectives, and comparative politics, the study of foreign government. The major offers students the opportunity to take course work in most subfields as well as seek practical experience through an internship. All students are encouraged to develop research and writing and statistical skills. Many students have continued their education in law or graduate school.

For the B.A. degree in Political Science, a minimum of 120 credits is required. Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 15 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits

PRESCRIBED COURSES (9 credits)

PLSC 1 GS(3), PLSC 3 GS;IL(3), PLSC 14 GS;IL(3) (Sem: 1-4)

ADDITIONAL COURSES (3 credits)

PLSC 7 GS(3); PLSC 17 GS(3) or PLSC 17W GS(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (24 credits)

(In meeting this requirement, select at least one course beyond the prescribed and additional courses listed above from each of the four fields offered in the program: American Government, Comparative Politics, International Politics, and Government in Theory and Practice.)

Select 12 credits at any level from a program-approved list (Sem: 1-8)

Select 12 credits at the 400 level from a program-approved list (Sem: 3-8)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-033

Review Date: 8/23/16

BD

Psychology

Altoona College (PSCBA)

University College (PYACC) - Penn State Beaver, Penn State Brandywine, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Worthington Scranton; Penn State York

The Psychology major will combine the knowledge, skills, and values of psychology with a liberal arts foundation. Students should develop a knowledge base consisting of concepts, theory, empirical findings, and trends within psychology; understand and apply basic research methods in psychology; use critical thinking and the scientific approach to solve problems related to behavior and mental processes; apply psychological principles to personal and social issues; and be able to understand the gender, sexual orientation, race, ethnicity, culture, and class issues in psychological theory, research, and practice. Students should also develop information and computer competence, communication skills, and develop realistic ideas about how to implement their psychology education in occupational pursuits in a variety of settings. The major may lead to either a Bachelor of Arts or a Bachelor of Science degree. The B.A. degree incorporates a broad exposure to the many facets of the field of psychology, in addition to the B.A. requirements. The B.S. degree provides the same exposure to the field of psychology and adds options in Science and Business to prepare students for more specific career directions. Students in both degree programs may also prepare for graduate school; research experience with faculty members is encouraged for such students.

For the B.A. degree in Psychology, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14-18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 41 credits^[1]

(This includes 0-4 credits of General Education GQ courses.)

PRESCRIBED COURSES (7 credits)

PSYCH 100 GS(3) (Sem: 1-4)

PSYCH 301(4) (Sem: 3-6)

ADDITIONAL COURSES (34 credits)

(Must include 15 credits at 400-level.)

Select 4 credits from PSYCH 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

Select 18 credits--a minimum of 3 credits from each of the following six categories

1. Learning and Cognition: PSYCH 256 GS(3), PSYCH 261 GS(3), PSYCH 268(3), PSYCH 426(3), PSYCH 427(3), PSYCH 452(3), PSYCH 456(3), PSYCH 457(3), PSYCH 458(3), PSYCH 459(3), PSYCH 461(3) (Sem: 2-8)
2. Social and Personality Psychology: PSYCH 221 GS(3), PSYCH 231 GS;US(3), PSYCH 232 GS;US;IL(3), PSYCH 238 GS(3), PSYCH 419(3), PSYCH 420(3), PSYCH 421(3), PSYCH 423(3), PSYCH 424(3), PSYCH 432 US(3), PSYCH 438(3), PSYCH 479 US(3) (Sem: 2-8)
3. Biological Bases of Behavior: PSYCH 253 GS(3), PSYCH 260(3), PSYCH 269(3), PSYCH 441(3), PSYCH 460(3), PSYCH 462(3), PSYCH 464(3), PSYCH 475(3), PSYCH 478(3) (Sem: 2-8)
4. Developmental Psychology: PSYCH 212 GS(3), PSYCH 410(3), PSYCH 412(3), PSYCH 413(3), PSYCH 414(3), PSYCH 415(3), PSYCH 416(3)/HDFS 445(3), PSYCH 474(3) (Sem: 2-8)
5. Applied and Clinical Psychology: PSYCH 243 GS(3), PSYCH 244 GS(3), PSYCH 270(3), PSYCH 281 GS(3), PSYCH 370 US(3), PSYCH 404(3), PSYCH 408(3), PSYCH 443(3), PSYCH 444(3), PSYCH 445(3), PSYCH 470(3), PSYCH 471(3), PSYCH 473(3), PSYCH 476(3), PSYCH 477(3), PSYCH 481(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3) (Sem: 2-8)
6. Capstone Experience: PSYCH 439(3), PSYCH 490(3), PSYCH 493(3-6), PSYCH 494(3-18), PSYCH 495(6-15), PSYCH 496(3-18) (Sem: 7-8)

Select 12 credits of additional Psychology courses from any offered for a total of 30 credits of Psychology courses beyond PSYCH 100 and PSYCH 301 (Sem: 2-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-05-071

Review Date: 02/21/2012

UCA Revision #1: 9/1/06

AL

Psychology

Altoona College (PSCBS)

University College (PYSCC) - Penn State Beaver, Penn State Brandywine, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Worthington Scranton, Penn State York

The Psychology major will combine the knowledge, skills, and values of psychology with a liberal arts foundation. Students should develop a knowledge base consisting of concepts, theory, empirical findings, and trends within psychology; understand and apply basic research methods in psychology; use critical thinking and the scientific approach to solve problems related to behavior and mental processes; apply psychological principles to personal and social issues; and be able to understand the gender, sexual orientation, race, ethnicity, culture, and class issues in psychological theory, research, and practice. Students should also develop information and computer competence, communication skills, and develop realistic ideas about how to implement their psychology education in occupational pursuits in a variety of settings. The major may lead to either a Bachelor of Arts or a Bachelor of Science degree. The B.A. degree incorporates a broad exposure to the many facets of the field of psychology, in addition to the B.A. requirements. The B.S. degree provides the same exposure to the field of psychology and adds options in Science and Business to prepare students for more specific career directions. Students in both degree programs may also prepare for graduate school; research experience with faculty members is encouraged for such students.

For the B.S. degree in Psychology, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14-18 credits

REQUIREMENTS FOR THE MAJOR: 65 credits [\[1\]](#)

(This includes 0-4 credits of General Education GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 41 credits

PRESCRIBED COURSES (7 credits)

PSYCH 100 GS(3) (Sem: 1-4)

PSYCH 301(4) (Sem: 3-6)

ADDITIONAL COURSES (34 credits)

(Must include 15 credits at the 400-level.)

Select 4 credits from PSYCH 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

Select 18 credits--a minimum of 3 credits from each of the following six categories:

1. Learning and Cognition: PSYCH 256 GS(3), PSYCH 261 GS(3), PSYCH 268(3), PSYCH 426(3), PSYCH 427(3), PSYCH 452(3), PSYCH 456(3), PSYCH 457(3), PSYCH 458(3), PSYCH 459(3), PSYCH 461(3) (Sem: 2-8)
2. Social and Personality Psychology: PSYCH 221 GS(3), PSYCH 231 GS:US(3), PSYCH 232 GS:US:IL(3), PSYCH 238 GS(3), PSYCH 419(3), PSYCH 420(3), PSYCH 421(3), PSYCH 423(3), PSYCH 424(3), PSYCH 432 US(3), PSYCH 438(3), PSYCH 479 US(3) (Sem: 2-8)
3. Biological Bases of Behavior: PSYCH 253 GS(3), PSYCH 260(3), PSYCH 269(3), PSYCH 441(3), PSYCH 460(3), PSYCH 462(3), PSYCH 464(3), PSYCH 475(3), PSYCH 478(3) (Sem: 2-8)
4. Developmental Psychology: PSYCH 212 GS(3), PSYCH 410(3), PSYCH 412(3), PSYCH 413(3), PSYCH 414(3), PSYCH 415(3), PSYCH 416(3)/HDFS 445(3), PSYCH 474(3) (Sem: 2-8)
5. Applied and Clinical Psychology: PSYCH 243 GS(3), PSYCH 244 GS(3), PSYCH 270(3), PSYCH 281 GS(3), PSYCH 370 US(3), PSYCH 404(3), PSYCH 408(3), PSYCH 443(3), PSYCH 444(3), PSYCH 445(3), PSYCH 470(3), PSYCH 471(3), PSYCH 473(3), PSYCH 476(3), PSYCH 477(3), PSYCH 481(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3) (Sem: 2-8)
6. Capstone Experience: PSYCH 439(3), PSYCH 490(3), PSYCH 493(3-6), PSYCH 494(3-18), PSYCH 495(6-15), PSYCH 496(3-18) (Sem: 7-8)

Select 12 credits of additional Psychology courses from any offered for a total of 30 credits of Psychology courses beyond PSYCH 100 and PSYCH 301 (Sem: 2-8)

REQUIREMENTS FOR THE OPTION: 24 credits

SCIENCE OPTION: (24 credits)

ADDITIONAL COURSES (15 credits)

Select 15 credits from: ANTH 21 GN(3); ANTH 22 GN(3); BBH 101 GHA(3) any BIOL course; any CHEM course; any MICRB course; any PHYS course (Sem: 2-8)

SUPPORTING COURSES (9 credits)

Select 6 credits in natural sciences/quantification from department list (Sem: 2-8)

Select 3 credits in social and behavioral sciences from department list (Sem: 2-8)

BUSINESS OPTION: (24 credits)

ADDITIONAL COURSES (15 credits)

Select 15 credits from: Any ACCTG course; BA 100 GS(3); BA 241(2), BA 242(2) or BA 243(4); Any ECON course; any FIN course; any HPA courses; any IB course; any MGMT course; any MKTG course; any SCM except 200 (Sem: 2-8)

SUPPORTING COURSES (9 credits)

Select 6 credits in natural sciences/quantification from department list (MATH 22 or MATH 110 recommended) (Sem: 2-8)

Select 3 credits in social and behavioral sciences from department list (Sem: 2-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-05-072

Review Date: 02/21/2012

UCA Revision #1: 8/31/06

AL

Psychology

Penn State Erie, The Behrend College (PSHBA)

The Psychology program at Penn State Behrend provides students a strong foundation in the application of psychological knowledge, skills and techniques for the solution and prevention of individual and social problems. A spectrum of courses (bio-behavioral, clinical, cognitive-experimental, developmental, educational, human factors, industrial/organizational, personality, and social) is united by a strong focus on the scientific method. All students are afforded the opportunity to participate in internships and research assistantships throughout their training. Bachelor-level graduates in psychology are equipped for various positions in human service agencies, businesses, industries, and laboratories. Those not joining the workforce following graduation most often continue their training, working towards a master's or doctoral degree in psychology; others go on to other disciplines, e.g., medical or law school. Courses within this degree can also be used to develop a specialty areas such as criminal justice, sociology or international studies.

The Bachelor of Arts degree requires nine additional credits and proficiency in a second language. The Bachelor of Arts degree helps to prepare students for careers in education-related settings, human services, clinical settings, and other related fields.

For the B.A. degree in Psychology, a minimum of 120 credits is required. Each student must earn a grade of C or better for prescribed and additional courses in the major and for each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 8-27 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 43 credits

(This includes 0-4 credits of General Education GQ courses.)

PRESCRIBED COURSES (12 credits) [\[1\]](#)

PSYCH 100 GS(3) (Sem: 1-4)

PSYCH 301(4)(Sem: 1-4)

PSYCH 406(4) (Sem: 5-8)

PSYCH 489(1) (Sem: 7-8)

ADDITIONAL COURSES (19 credits) [\[1\]](#)

PSYCH 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-4)

Select 3 credits in each of the five content categories below:

1. Biological Bases of Behavior - PSYCH 253 GS(3), PSYCH 260(3), PSYCH 261 GS(3), PSYCH 269(3), PSYCH 425(3), PSYCH 439(3), PSYCH 441(3), PSYCH 450(3), PSYCH 460(3), PSYCH 461(3), PSYCH 462 (3), PSYCH 464(3), PSYCH 475(3), PSYCH 478(3) (Sem: 1-8)

2. Social/Developmental - PSYCH 212 GS(3), PSYCH 221 GS(3), PSYCH 412(3), PSYCH 413(3), PSYCH 414(3), PSYCH 415(3), PSYCH 416(3), PSYCH 420(3), PSYCH 421(3), PSYCH 423(3), PSYCH 424(3) (Sem: 1-8)

3. Cognitive/Learning - PSYCH 253 GS(3), PSYCH 256 GS(3), PSYCH 261 GS(3), PSYCH 268(3), PSYCH 413(3), PSYCH 426(3), PSYCH 427(3), PSYCH 439(3), PSYCH 452(3), PSYCH 456(3), PSYCH 461(3) (Sem: 1-8)

4. Clinical/Applied - EDPSY 14(3), HDFS 311(3), HDFS 315(3), PSYCH 238 GS(3), PSYCH 243 GS(3), PSYCH 244 GS(3), PSYCH 270(3), PSYCH 281 GS(3), PSYCH 370(3), PSYCH 404(3), PSYCH 405(3), PSYCH 408(3), PSYCH 414(3), PSYCH 419(3), PSYCH 438(3), PSYCH 443(3), PSYCH 444(3), PSYCH 445(3), PSYCH 452, PSYCH 456(3), PSYCH 459(3), PSYCH 470(3), PSYCH 471(3), PSYCH 473(3), PSYCH 474(3), PSYCH 476(3), PSYCH 477(3), PSYCH 481(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3) (Sem: 1-8)

5. Diversity - PSYCH 230 GS(3), PSYCH 231 GS;US;IL(3), PSYCH 232 GS;US;IL(3), PSYCH 422(3), PSYCH 432(3), PSYCH 479/WMNST 471(3) (Sem: 1-8)

Note: PSYCH 414 may be counted in either Social/Developmental or Clinical/Personality, but not both.

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 3 credits of a structured practicum, internship or an approved research experience (PSYCH 294, PSYCH 296, PSYCH 494, PSYCH 495 or PSYCH 496 may be applied to this requirement) (Sem: 3-8)

Select 9 credits of 400-level psychology courses from any combination of categories in consultation with adviser (except 494, 495, 496) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-016

Review Date: 10/7/2014

UCA Revision #1: 9/1/06

UCA Revision #2: 7/30/07

BD

Psychology

Penn State Erie, The Behrend College (PSHBS)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

The Psychology program at Penn State Behrend provides students a strong foundation in the application of psychological knowledge, skills and techniques for the solution and prevention of individual and social problems. A spectrum of courses (bio-behavioral, clinical, cognitive-experimental, developmental, educational, human factors, industrial/organizational, personality, and social) is united by a strong focus on the scientific method. All students are afforded the opportunity to participate in internships and research assistantships throughout their training. Bachelor-level graduates in psychology are equipped for various positions in human service agencies, businesses, industries, and laboratories. Those not joining the workforce following graduation most often continue their training, working towards a master's or doctoral degree in psychology; others go on to other disciplines, e.g., medical or law school. Courses within this degree can also be used to develop a specialty in areas such as criminal justice, sociology or international studies.

The Bachelor of Science degree offers three multidisciplinary options. The Science option is intended for students with a strong interest in science and requires more course work in the biological, physical, social, and mathematical sciences than does the Bachelor of Arts program. The Psychology in the Workplace option is designed for students who wish to combine their interests in business and psychology. The Human Factors and Design option combines perspectives within the fields of psychology and engineering in order to design products that maximize human functioning.

The Bachelor of Science degree helps to prepare students for future careers in clinical developmental, educational, human factors, industrial organization, and other related health fields.

For the B.S. degree in Psychology, a minimum of 120 credits is required. Each student must earn a grade of C or better for prescribed and additional courses in the major and for each 300- and 400-level course in the major field.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(4-8 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14-15 credits

REQUIREMENTS FOR THE MAJOR: 64 credits

(This includes 3-4 credits of General Education GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 46 credits

PRESCRIBED COURSES (12 credits) [\[1\]](#)

PSYCH 100 GS(3) (Sem: 1-4)

PSYCH 301(4) (Sem: 3-6)

PSYCH 406(4) (Sem: 5-8)

PSYCH 489(1) (Sem: 7-8)

ADDITIONAL COURSES (19 credits) [\[1\]](#)

PSYCH 200(4) or STAT 200 GQ(4) (Sem: 1-4)

Select 3 credits in each of the following five content categories below:

1. Biological Bases of Behavior - PSYCH 253 GS(3), PSYCH 260(3), PSYCH 261 GS(3), PSYCH 269(3), PSYCH 425(3), PSYCH 439(3), PSYCH 441(3), PSYCH 450(3), PSYCH 460(3), PSYCH 461(3), PSYCH 462 (3), PSYCH 464(3), PSYCH 475(3), PSYCH 478(3) (Sem: 1-8)

2. Social/Developmental - PSYCH 212 GS(3), PSYCH 221 GS(3), PSYCH 412(3), PSYCH 413(3), PSYCH 414(3), PSYCH 415(3), PSYCH 416(3), PSYCH 420(3), PSYCH 421(3), PSYCH 423(3), PSYCH 424(3) (Sem: 1-8)

3. Cognitive/Learning - PSYCH 253 GS(3), PSYCH 256 GS(3), PSYCH 261 GS(3), PSYCH 268(3), PSYCH 413(3), PSYCH 426(3), PSYCH 427(3), PSYCH 439(3), PSYCH 452(3), PSYCH 456(3), PSYCH 461(3) (Sem: 1-8)

4. Clinical/Applied - EDPSY 14(3), HDFS 311(3), HDFS 315(3), PSYCH 238 GS(3), PSYCH 243 GS(3), PSYCH 244 GS(3), PSYCH 270(3), PSYCH 281 GS(3), PSYCH 370(3), PSYCH 404(3), PSYCH 405(3), PSYCH 408(3), PSYCH 414(3), PSYCH 419(3), PSYCH 438(3), PSYCH 443(3), PSYCH 444(3), PSYCH 445(3), PSYCH 452, PSYCH 456(3), PSYCH 459(3), PSYCH 470(3), PSYCH 471(3), PSYCH 473(3), PSYCH 474(3), PSYCH 476(3), PSYCH 477(3), PSYCH 481(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3) (Sem: 1-8)

5. Diversity - PSYCH 230 GS(3), PSYCH 231 GS;US;IL(3), PSYCH 232 GS;US;IL(3), PSYCH 422(3), PSYCH 432(3), PSYCH 479/WMNST 471(3) (Sem: 1-8)

Note: PSYCH 414 may be counted in either Social/Developmental or Clinical/Personality, but not both.

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 3 credits of a structured practicum, internship or an approved research experience (PSYCH 294, PSYCH 296, PSYCH 494, PSYCH 495 or PSYCH 496 may be applied to this requirement) (Sem: 3-8)

Select 3 credits of quantification courses from the departmental list - Quantification (Sem: 3-8)

Select 9 credits of 400-level psychology courses from any combination of categories in consultation with adviser (except 494, 495, 496) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 18 credits

(Option courses may not double count with major requirements)

HUMAN FACTORS AND DESIGN OPTION: (18 credits)

PRESCRIBED COURSES (6 credits) [\[1\]](#)

PSYCH 244 GS(3) (Sem: 3-8)

PSYCH 444(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits) [\[1\]](#)

PSYCH 253 GS(3) or PSYCH 256 GS(3) (Sem: 2-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits in psychology, engineering and business-related courses from the departmental list - Human Factors and Design Option and in consultation with adviser (Sem: 3-8)

PSYCHOLOGY IN THE WORKPLACE OPTION: (18 credits)

PRESCRIBED COURSES (3 credits) [\[1\]](#)

PSYCH 281 GS(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS: 15 credits

Select 15 credits in business-related courses from the departmental list - Psychology in the Workplace Option and in consultation with adviser (6 credits may be selected from PSYCH 282, PSYCH 484, or PSYCH 485) (Sem: 3-8)

SCIENCE OPTION: (18 credits)

ADDITIONAL COURSES (3 credits) [\[1\]](#)

PSYCH 253(3) or PSYCH 260A(3) or PSYCH 261(3) (Sem: 3-8)*

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits in science-related courses from the departmental list - Science Option and in consultation with adviser (Sem: 3-8) *

* Six credits of PSYCH courses listed in the Additional Courses category for the Science Option that the student does not apply under Additional Courses for the Science Option may be taken as Supporting Courses counting toward the Science Option. However, these credits may *not* count in both the Science Option *and* towards the Additional Courses or Supporting Courses and Related Areas Common Requirements for the Major.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-017

Review Date: 10/7/2014

UCA Revision #1: 9/1/06

UCA Revision #2: 7/30/07

BD

Psychological and Social Sciences

Abington College (PSSBA)

Dr. Frances Sessa, Head, Division of Social Sciences

Building on the interdisciplinary and cross-disciplinary strengths of Penn State Abington, the Psychological and Social Sciences B.A. is designed to respond to the demand for a program emphasizing the social and behavioral sciences leading to an understanding of human behavior and its influence upon society as well as the influence of social forces on individuals. The program is distinguished by its interdisciplinary and cross-disciplinary course work and required field experience. The B.A. provides a broad theoretical foundation in social and psychological theory as well as the opportunity to engage in supervised field experience. The major offers students a choice of course clusters focused on specialized areas such as social psychology, developmental studies, organizational behavior and leadership, bio-behavior and diversity, and counseling. The major is designed to prepare students for a variety of career fields including human resources, business administration, mental health, and social work as well as for continued study in graduate or professional school.

For the B. A. degree in Psychological and Social Sciences, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 5-6 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 46-47 credits [\[1\]](#)

PRESCRIBED COURSES (10 credits)

PSYCH 100 GS(3) (Sem: 1-2)

ANTH 45 GS;US;IL(3) (Sem: 1-4)

PSYCH 200 GQ(4) (Sem: 3-4)

ADDITIONAL COURSES (15-16 credits)

SOC 1 GS(3) or SOC 5 GS(3) (Sem: 1-4)

HDFS 129 GS(3) or PSYCH 212 GS(3) (Sem: 1-4)

HDFS 312(3) or PSYCH 301(4) (Sem: 3-4)

BBH 301(3) or HDFS 301(3) (Sem: 3-6)

Select 3 credits of ANTH 495(1-18), HDFS 495A(3-8), PSYCH 495(1-15), or SOC 495(1-18) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

(At least 15 credits must be at the 400-level)

Select 6-15 credits from the following HDFS and PSYCH courses:

HDFS 229 GS(3), HDFS 239 GS(3), HDFS 249 GS(3), HDFS 250 US(3), HDFS 315 US(3), HDFS 432(3), HDFS 433(3), HDFS 445(3), HDFS 468(3), PSYCH 221 GS(3), PSYCH 281 GS(3), PSYCH 407(3), PSYCH 412(3), PSYCH 415(3), PSYCH 416(3), PSYCH 420(3), PSYCH 422(3), PSYCH 423(3), PSYCH 424(3), PSYCH 426(3), PSYCH 438(3), PSYCH 441(3), PSYCH 470(3), PSYCH 478(3), PSYCH 479 US(3), PSYCH 481(3), PSYCH 484(3), PSYCH 485(3), PSYCH 496B(3), PSYCH 497(1-9) (Sem: 5-8)

Select 6-15 credits from the following SOC and ANTH courses:

ANTH 2 GS(3), ANTH 11 GS;IL(3), ANTH 22 GN(3), ANTH 40(3), ANTH 146 GS;US(3), ANTH 197(1-9), ANTH 199 IL(1-12), ANTH 216 GN;GS(3), ANTH 321(3), ANTH 380(3), ANTH 395(1-18), ANTH 448(3), SOC 3 GS(3), SOC 30 GS(3), SOC 35(3), SOC 103 US(3), SOC 109(3), SOC 110 GS;US(3), SOC 309(3), SOC 403(3), SOC 405(3), SOC 406(3), SOC 409 US(3), SOC 416 US(3), SOC 429(3), SOC 430(3), SOC 455(3), SOC 456(3), SOC 471(3), SOC 497(1-9) (Sem: 5-8)

Select 0-9 credits from the following other social sciences courses:

BBH 302 US(3), BBH 315 US(3), CAS 352(3), CAS 415(3), CAS 455 US(3), CNED 404(3), COMM 100 GS(3), COMM 120(3), COMM 411(3), EDPSY 14(3), WMNST 471 US(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lasted Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-001

Review Date: 04/08/2014

UCA Revision #1: 9/1/06

Dept head revised by Publications: 4/23/07

AB

Psychological and Social Sciences

Abington College (PSSBS)

Dr. Frances Sessa, Head, Division of Social Sciences

Building on the interdisciplinary and cross-disciplinary strengths of Penn State Abington, the Psychological and Social Sciences B.S. is designed to respond to the demand for a program emphasizing the social and behavioral sciences leading to an understanding of human behavior and its influence upon society as well as the influence of social forces on individuals. The program is distinguished by its interdisciplinary and cross-disciplinary course work and required field experience. The degree program offers students a choice of course clusters focused on specialized areas such as social psychology, developmental studies, organizational behavior and leadership, bio-behavior and diversity, and counseling. The B.S. provides a broad theoretical foundation in social and psychological theory as well as the opportunity to engage in supervised field experience. In addition, the B.S. degree emphasizes quantitative research skills and requires the completion of a senior thesis. The major is designed to prepare students for a variety of career fields including human resources, business administration, mental health, and social work as well as for continued study in graduate or professional school.

For the B.S. degree in Psychological and Social Sciences, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(7-8 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 12-17 credits

REQUIREMENTS FOR THE MAJOR: 66-70 credits^[1]

(This includes 7-8 credits of General Education courses; 3-4 credits of GN courses; 4 credits of GQ courses.)

PRESCRIBED COURSES (17 credits)

MATH 110 GQ(4), PSYCH 100 GS(3) (Sem: 1-2)

ANTH 45 GS;US;IL(3) (Sem: 1-4)

PSYCH 200 GQ(4) (Sem: 3-4)

SOC 471(3) (Sem: 7-8)

ADDITIONAL COURSES (29 credits)

BIOL 110 GN(4) or BIOL 141 GN(3) and BIOL 142(1) (Sem: 1-4)

SOC 1 GS(3) or SOC 5 GS(3) (Sem: 1-4)

HDFS 129 GS(3) or PSYCH 212 GS(3) (Sem: 1-4)

PSYCH 301(4) or HDFS 312(3) (Sem: 3-4)

BBH 301(3) or HDFS 301(3) (Sem: 3-6)

CAS 352(3) or CAS 455 US(3) (Sem: 5-8)

Select 3 credits of ANTH 495(1-18), HDFS 495C(3-8), PSYCH 495(1-15), or SOC 495(1-18) (Sem: 7-8)

Select 3 credits of ANTH 494(1-12), HDFS 494(1-12), PSYCH 494(3-6), or SOC 494(1-12) (Sem: 7)

Select 4 credits of ANTH 494(1-12), HDFS 494(1-12), PSYCH 494(3-6), or SOC 494(1-12) (Sem: 8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

(at least 12 credits must be at the 400 level)

Select 6-15 credits from the following HDFS and PSYCH courses:

HDFS 229 GS(3), HDFS 239 GS(3), HDFS 249 GS(3), HDFS 250 US(3), HDFS 315 US(3), HDFS 432(3), HDFS 433(3), HDFS 445(3), HDFS 468(3), PSYCH 221 GS(3),

PSYCH 281 GS(3), PSYCH 407(3), PSYCH 412(3), PSYCH 415(3), PSYCH 416(3), PSYCH 420(3), PSYCH 422(3), PSYCH 423(3), PSYCH 424(3), PSYCH 426(3),

PSYCH 438(3), PSYCH 441(3), PSYCH 470(3), PSYCH 478(3), PSYCH 479 US(3), PSYCH 481(3), PSYCH 484(3), PSYCH 485(3), PSYCH 496B(3), PSYCH 497(1-9)

(Sem: 5-8)

Select 6-15 credits from the following SOC and ANTH courses:

ANTH 2 GS(3), ANTH 11 GS;IL(3), ANTH 22 GN(3), ANTH 40(3), ANTH 146 GS;US(3), ANTH 197(1-9), ANTH 199 IL(1-12), ANTH 216 GN;GS(3), ANTH 321(3),

ANTH 380(3), ANTH 395(1-18), ANTH 448(3), SOC 3 GS(3), SOC 30 GS(3), SOC 35(3), SOC 103 US(3), SOC 109(3), SOC 110 GS;US(3), SOC 309(3), SOC 403(3),

SOC 405(3), SOC 406(3), SOC 409 US(3), SOC 416 US(3), SOC 429(3), SOC 430(3), SOC 455(3), SOC 456(3), SOC 471(3), SOC 497(1-9) (Sem: 5-8)

Select 0-9 credits from the following other social sciences courses:

BB H 302 US(3), BBH 315 US(3), CAS 352(3), CAS 415(3), CAS 455 US(3), CNED 404(3), COMM 100 GS(3), COMM 120(3), COMM 411(3), EDPSY 014(3), WMNST

471 US(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Lasted Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-002

Review Date: 04/08/2014

UCA Revision #1: 8/31/06

Dept head revised by Publications: 4/23/07

AB

Psychology

University Park, College of the Liberal Arts (PSYBA)
World Campus

PROFESSOR MELVIN MARK, *Head*

This major is designed for students who want to learn about behavior, normal and abnormal, how it is studied, and its relation to applied areas. Students are encouraged to conduct research with members of the faculty and/or take a practicum in an applied setting. Graduates are equipped for various positions in human service agencies, industrial settings, or laboratories. Others go on to professional school, e.g., medical school, law school, or to continue their training in psychology working toward a master's or a doctoral degree. Majors may elect either a Bachelor of Arts or a Bachelor of Science program.

In order to be eligible for entrance to the PSYBA major, a student at any location must have: 1) attained at least a 2.00 cumulative grade-point average; 2) completed PSYCH 100 GS(3) with a grade of C or better; 3) completed STAT 200 GQ(4) or PSYCH 200 GQ(4), at least 3 credits of GQ courses (not including STAT 200), and at least 3 credits of GS courses (not including PSYCH 100) with a grade of C or better.

For the B.A. degree in Psychology, a minimum of 123 credits is required

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 13 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 47 credits^[1]

(This includes 6 credits of General Education GQ courses.)

PRESCRIBED COURSES (13 credits)

PSYCH 100 GS(3) (Sem: 1-4)

PSYCH 105(3) (Sem: 2-5)

PSYCH 301(4) (Sem: 3-6)

PSYCH 490(3) (Sem: 7-8)

ADDITIONAL COURSES (34 credits)

Select 6 credits of GQ courses (Sem: 1-4)

PSYCH 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

Select 12 credits of 200-level PSY courses (not to include PSYCH 294, PSYCH 296, or PSYCH 297). At least 3 credits must be from each group a, b, and c:

a. PSYCH 253 GS(3), PSYCH 256 GS(3), PSYCH 260(3), PSYCH 261 GS(3) (Sem: 3-8)

b. PSYCH 212 GS(3), PSYCH 221 GS(3), PSYCH 231 GS;US(3), PSYCH 238 GS(3) (Sem: 3-8)

c. PSYCH 243 GS(3), PSYCH 269(3), PSYCH 270(3), PSYCH 281 GS(3) (Sem: 3-8)

Select 12 credits of PSY courses at the 400 level (not to include PSYCH 490, and including no more than 3 credits of PSYCH 493, PSYCH 494, PSYCH 495, or PSYCH 496) (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2004

Blue Sheet Item #: 32-06-181

Review Date: 4/13/04

UCA Revision #1: 8/14/06

LA

Psychology

University Park, College of the Liberal Arts (PSYBS)
World Campus

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR MELVIN MARK, *Head*

This major is designed for students who want to learn about behavior, normal and abnormal, how it is studied, and its relation to applied areas. Students are encouraged to conduct research with members of the faculty and/or take a practicum in an applied setting. Graduates are equipped for various positions in human service agencies, industrial settings, or laboratories. Others go on to professional school, e.g., medical school, law school, or to continue their training in psychology working toward a master's or a doctoral degree. Majors may elect either a Bachelor of Arts or a Bachelor of Science program.

The B.S. degree program requires more course work in the sciences than the B.A. program, and students may select courses from one of four areas--mathematics/computer science, statistics, business, or biology--which may be taken instead of a foreign language.

In order to be eligible for entrance to the PSYBS major, a student at any location must have: 1) attained at least a 2.00 cumulative grade-point average; 2) completed PSYCH 100 GS(3) with a grade of C or better; 3) completed STAT 200 GQ(4) or PSYCH 200 GQ(4), at least 3 credits of GQ courses (not including STAT 200), and at least 3 credits of GS courses (not including PSYCH 100) with a grade of C or better.

For the B.S. degree in Psychology, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(9 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 10-13 credits

REQUIREMENTS FOR THE MAJOR: 74-77 credits^[1]
(This includes 9 credits of General Education courses: 3 credits of GWS courses and 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 50 credits

PRESCRIBED COURSES (16 credits)
PSYCH 100 GS(3) (Sem: 1-4)
PSYCH 105(3) (Sem: 2-5)
ENGL 202A GWS(3) (Sem: 3-4)
PSYCH 301W(4) (Sem: 3-6)
PSYCH 490(3) (Sem: 7-8)

ADDITIONAL COURSES (34 credits)
Select 6 credits of GQ courses (Sem: 1-4)
PSYCH 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)
Select 12 credits of 200-level PSY courses (not to include PSYCH 294, PSYCH 296, or PSYCH 297). At least 3 credits must be from each group a, b, and c:
a. PSYCH 253 GS(3), PSYCH 256 GS(3), PSYCH 260(3), PSYCH 261 GS(3) (Sem: 3-8)
b. PSYCH 212 GS(3), PSYCH 221 GS(3), PSYCH 231 GS(3), PSYCH 238 GS(3) (Sem: 3-8)
c. PSYCH 243 GS(3), PSYCH 269(3), PSYCH 270(3), PSYCH 281 GS(3) (Sem: 3-8)
Select 12 credits of PSYCH courses at the 400 level (not including PSYCH 490, and including no more than 3 credits of PSYCH 493, PSYCH 494, PSYCH 495, or PSYCH 496) (Sem: 3-8)

REQUIREMENTS FOR THE OPTION: 24-27 credits

LIFE SCIENCES OPTION: (24 credits)

ADDITIONAL COURSES (15 credits)
Select 15 credits from groups a, b, c, and d, including at least 3 credits from each of three different groups:
--a. Genetics: ANTH 218 GN(4), ANTH 460(3), BIOL 133 GN(3) or BIOL 222(3) (Sem: 3-6)
--b. Biological Anthropology: ANTH 021 GN(3), ANTH 022 GN(3), ANTH 040(3), ANTH 401(3), BB H 410(3), H P A 310(3), NUTR 251(3) (Sem: 3-6)
--c. Biobehavioral Implications: Any BB H course, except BB H 310(3); HD FS 417(3), HD FS 468(3), RHS 100(3), RHS 300(3), RHS 403(3) (Sem: 3-6)
--d. Biology and Chemistry: BIOL 110 GN(4), BIOL 141 GN(3), BIOL 155 GN(3), BIOL 177 GN(3), CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 3 credits in natural sciences from department list (Sem: 1-8)
Select 6 credits in social and behavioral sciences from department list (Sem: 1-8)

BUSINESS OPTION: (24 credits)

ADDITIONAL COURSES (15 credits)
Select 15 credits from at least three different groups. Three (3) credits in any category can be replaced by internship (L A 495), but internship credits alone cannot be used to complete a category.

Group 1.
a. ECON 102 GS(3), ECON 104 GS(3), ECON 014 GS(3), ECON 302 GS(3) or higher-numbered ECON course; PL SC 412(3), PL SC 444(3), PL SC 481(3), PL SC 490(3) (Sem: 3-6)
b. B A 301(3), FIN 301(3) or any higher-numbered FIN course (Sem: 3-6)
c. B A 303(3), MKTG 301(3) or any higher-numbered MKTG course (Sem: 3-6)
d. ACCTG 211(4) (Sem: 3-6)

Group 2.
a. Management: H P A 057(3), H P A 101(3), H P A 301(3) or any higher-numbered H P A course, B A 304(3), MGMT 301(3) or any higher-numbered MGMT course (Sem: 3-6)
b. Law and ethics: B A 302(3), B LAW 243(3), LER 460(3), PHIL 119 GH(3), PHIL 406(3), PHIL /S T S 407(3), PHIL 418(3), PHIL /S T S 432(3), SCM 301(3) (Sem: 3-6)
c. Labor relations: LER 100 GS(3), any LER 400 or higher (Sem: 3-6)
d. Communication: CAS 352(3), CAS 450W(3), CAS 452(3), ENGL 419(3), ENGL 460(3), ENGL 479(3), LER 464(3) (Sem: 3-6)

Group 3.

- a. Global view: ANTH 455(3), GEOG 424(3), GEOG 439(3), H P A 401(3), I B 303(3), PL SC 487(3) (Sem: 3-6)
- b. Gender and race: AF AM/LER/PL SC 445Y(3), SOC 455(3), SOC /WMNST 456(3), CED/WMNST 420(3), SOC/WMNST 456(3), LER/WMNST 472(3) (Sem: 3-6)
- c. History: HIST 423 IL(3), HIST/LER 458Y US(3) (Sem: 3-6)
- d. Technology: IST 110(3)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits in arts/humanities from department list (Sem: 1-8)

Select 3 credits in natural sciences from department list (Sem: 1-8)

Select 3 credits in social and behavioral sciences from department list (Sem: 1-8)

NEUROSCIENCE OPTION: (24-27 credits)**ADDITIONAL COURSES** (15-18 credits)

PSYCH 260(3) (also counts in category a of COMMON REQUIREMENTS FOR THE MAJOR) (Sem: 3-6)

Select 15 credits from groups a, b, c, d, and e, including at least 3 credits from each of four different groups:

- a. Genetics: BIOL 133 GN(3), BIOL 110 GN(4), or BIOL 222(3) (Sem: 3-6)
- b. Physiology: BIOL 141 GN(3) or BIOL 472(3) (Sem: 3-6)
- c. Organic Chemistry: CHEM 202(3), CHEM 210(3), or CHEM 212(3) (Sem: 3-6)
- d. Cell Biology: BIOL 230W GN(4), BIOL 469(3), MICRB 106 GN(3), MICRB 201(3), MICRB 251(3) (Sem: 3-6)
- e. Other Topics: BIOL 240W GN(4), BIOL 177 GN(3), BIOL 409(3), BB H 470(3) (Sem: 3-6)

NOTE: Students planning to apply to medical school should select this option and choose courses to meet the following minimal requirements for most medical schools: BIOL 110 GN(4) and BIOL 230W GN(4) or BIOL 240W GN(4); CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 210(3), CHEM 212(3), and CHEM 213(2); PHYS 211 GN(4) and PHYS 212 GN(4), or PHYS 250 GN(4) and PHYS 251 GN(4).

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 6 credits in natural sciences from department list (Sem: 1-8)

Select 3 credits in social and behavioral sciences from department list (Sem: 1-8)

QUANTITATIVE SKILLS OPTION: (24 credits)**ADDITIONAL COURSES** (15 credits)

Select a total of 15 credits from groups a, b, c, and d:

- a. Select at least 3 credits from MATH 018 GQ(3), MATH 110 GQ(4), MATH 111 GQ(2), MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 3-6)
- b. (Optional) Select 3 credits from CMPSC 101 GQ(3), CMPSC 121 GQ(3), CMPSC 201 GQ(3), CMPSC 202 GQ(3), CMPSC 203 GQ(4) (*NOTE: Students may take only one of the courses in category b for credit.*) (Sem: 3-6)
- c. 1. Select 3 credits from STAT 318(3), STAT 414(3), STAT 418(3) (*NOTE: Students may take only one of the courses in category c. 1. for credit.*) (Sem: 5-6)
- c. 2. Select at least 3 credits from STAT 319(3), STAT 415(3), STAT 416(3), STAT 460(3), STAT 462(3), STAT 464(3) (Sem: 5-6)
- d. CAS 483(3), CMPSC 122(3), PSYCH 404(3), PSYCH 405(3) (Sem: 3-6)

NOTE: Students may fulfill the requirements of the Quantitative Skills option by completing a minor in either Statistics or Computer Science and Engineering in lieu of the course requirements listed above. Students choosing this option are encouraged to consult with an adviser designated by the Department of Psychology to determine the suitability of particular courses given their quantitative backgrounds. Other courses with advanced quantitative content may be substituted in category d with adviser's approval.

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits in arts/humanities from department list (Sem: 1-8)

Select 6 credits in natural sciences from department list (Sem: 1-8)

Integrated B.S. in Psychology and M.S. in Human Resources and Employment Relations

The integrated PSY BS and HRER MS is a five-year program designed for academically talented undergraduate Psychology baccalaureate students to obtain both the B.S. degree in Psychology and the M.S. degree in HRER in an intense, accelerated program of study. Students will develop expertise in the human resources and employment relations field beyond that provided by their Psychology B.S. degree. The undergraduate psychology curriculum allows students to study (1) personnel selection, (2), training and development, and (3) organizational psychology. The graduate curriculum provides for a more intensive, individualized, and focused examination of the human resources and employment relations field, including (1) the roles employers, employees, employee organizations and public policy makers play in the employment relationship, (2) the complex personal and organizational issues inherent in the employment relationship, (3) the laws that form the legal framework for the employee-employer relationship, (4) the tools needed to systematically analyze those complex issues and evaluate research relevant to those analyses, and (5) human resource management policies and practices that contribute to individual and organizational success. It also provides an opportunity for students to explore a concentrated sub-area of the HRER field in depth. The program culminates with the student either completing a thesis or masters paper. Upon completion of the integrated degree, students will be well-positioned to assume positions of greater responsibility in Industrial/Organizational Psychology, Human Resource Management, Employment Relations, and related careers as a result of the advanced knowledge and expertise gained through the program.

A minimum of 37 credits is needed to complete the M.S. degree in HRER. Twelve credits (400-level and above) can apply to both undergraduate and graduate degrees; six of these must be at the 500 or 800 level.

Admissions Requirements

Admission decisions for the B.S. Psychology /M.S. Human Resources and Employment Relations program are based on the quality of the applicant's credentials. The decisions are made after a review of the complete application portfolio. The integrated B.S./M.S. program will be limited to highly talented undergraduates. Applicants to the integrated program:

- Must be enrolled in the PSYCH B.S. program, pursuing the Business Option, with the successful completion of PSYCH 281, Introduction to Industrial-Organizational Psychology, AND one of the following: PSYCH 482, Selection and Assessment in Organizations, PSYCH 484, Work Attitudes and Motivation, or PSYCH 485, Leadership in Work Settings;
- Must complete the Penn State graduate degree application and pay the application fee;
- Shall be admitted no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer of AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study;
- Must have an overall GPA of 3.2 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in the major;
- Must submit three letters of recommendation;
- Must submit a writing sample, a resume, and a 2-3 page essay articulating career and educational goals that demonstrates the applicant's written communication skills.

Degree Requirements**Psychology B.S. Requirements****GENERAL EDUCATION:** 45 credits

(9 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 10-13 credits**REQUIREMENTS FOR THE MAJOR:** 74-77 credits^[1]

(This includes 9 credits of General Education courses: 3 credits of GWS courses and 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR: 50 credits**PRESCRIBED COURSES** (16 credits)

PSYCH 100 GS(3) (Sem: 1-4)
 PSYCH 105(3) (Sem: 2-5)
 ENGL 202A GWS(3) (Sem: 3-4)
 PSYCH 301W(4) (Sem: 3-6)
 PSYCH 490(3) (Sem: 7-8)

ADDITIONAL COURSES (34 credits)

Select 6 credits of GQ courses (Sem: 1-4)
 PSYCH 200 GQ(4) or STAT 200 GQ(4) (Sem: 3-4)

Select 12 credits of 200-level PSY courses (not to include PSYCH 294, PSYCH 296, or PSYCH 297).

a. At least 3 credits must be from each group a, b, and c:

- PSYCH 253 GS(3), PSYCH 256 GS(3), PSYCH 260(3), PSYCH 261 GS(3) (Sem: 3-8)
 b. PSYCH 212 GS(3), PSYCH 221 GS(3), PSYCH 231 GS;US(3), PSYCH 238 GS(3) (Sem: 3-8)
 c. PSYCH 281 GS(3) (Sem: 3-8)
 d. Any 200-level PSYCH course

Select 12 credits of PSYCH courses at the 400 level (not including PSYCH 490, and including no more than 3 credits of PSYCH 493, PSYCH 494, PSYCH 495, or PSYCH 496) (Sem: 3-8)

REQUIREMENTS FOR THE BUSINESS OPTION: 24 credits**ADDITIONAL COURSES** (15 credits)

Select 15 credits from at least two different groups. 12 of these credits will fall under group 2, section c (Labor Relations) and will double count for both the undergraduate and graduate degrees, at least 6 must be at the 500 level. Three (3) credits in any category can be replaced by internship (L A 495), but internship credits alone cannot be used to complete a category.

1.
 - a. ECON 102 GS(3), ECON 104 GS(3), ECON 014 GS(3), ECON 302 GS(3) or higher-numbered ECON course; PHIL 420(3), PL SC 412(3), PL SC 444(3), PL SC 481(3), PL SC 490(3) (Sem: 3-6)
 - b. BA 301(3), FIN 301(3) or any higher-numbered FIN course (Sem: 3-6)
 - c. BA 303(3), MKTG 301(3) or any higher-numbered MKTG course (Sem: 3-6)
 - d. ACCTG 211(4) (Sem: 3-6)
2.
 - a. Management: H P A 101(3), H P A 301(3) or any higher-numbered H P A course, BA 304(3), MGMT 301(3) or any higher-numbered MGMT course (Sem: 3-6)
 - b. Law and ethics: B LAW 243(3), LER 460(3), PHIL 119 GH(3), PHIL 406(3), PHIL /S T S 407(3), PHIL 418(3), PHIL /S T S 432(3), SCM 301(3) (Sem: 3-6)
 - c. Labor relations: 12 of these credits will double count
 LER 100 GS(3), Any 400-level LER course (Sem: 3-6)
 HRER 500(3), HRER 501(3), HRER 502(3), HRER 503(3), HRER 504(3), HRER 505(3) (Sem 7-8)
 - d. Communication: CAS 352(3), CAS 450W(3), CAS 452(3), ENGL 419(3), LER 464(3) (Sem: 3-6)
3.
 - a. Global view: ANTH 451(3), ANTH 455(3), GEOG 424(3), GEOG 439(3), H P A 401(3), PL SC 487(3), PL SC 441(3) (Sem: 3-6)
 - b. Gender and race: AFAM/LER /PLSC 445Y(3), SOC 455(3), SOC /WMNST 456(3), CED/WMNST 420(3), SOC/WMNST 456(3), LER/WMNST 472(3) (Sem: 3-6)
 - c. History: HIST 423 IL(3), HIST 425 IL(3), HIST/LER 458Y US(3) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits in arts/humanities from department list (Sem: 1-8)
 Select 3 credits in natural sciences from department list (Sem: 1-8)
 Select 3 credits in social and behavioral sciences from department list (Sem: 1-8)

M.S. HRER Requirements

37 credits at the 400-level or higher; 18 credits must be at the 500-level
 12 of the 37 credits can be double-counted for B.S. and M.S.; at least 6 of these credits must be at the 500-level

PRESCRIBED COURSES (22 credits)

HRER 501(3), HRER 502(3), HRER 504(3), HRER 505(3), HRER 510(1), HRER 512(3)**, HRER 513(3), HRER 516(3)
 ** or other statistics course approved in advance by Graduate Director

ADDITIONAL COURSES (15 credits)

Choose any 500-level HRER course or 400-level LER course, HRER 600(3-6)

Emphasis Courses (6 credits)

An emphasis is an area of study related to a particular aspect or domain of human resources or employee relations. Select 6 credits of 400-level LER courses or 500-level HRER courses in consultation with an adviser.

Master's Research Paper or Master's Thesis (6 credits)

Students must completed either a Master's Research Paper or a Master's Thesis. Students choosing the Thesis option must complete 6 thesis credits (HRER 600). These credits can be counted towards the 15 credits required from the M.S. Additional Courses section above. The Thesis option is intended for students anticipating additional graduate education beyond the master's degree.

^[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-111

Review Date: 08/23/2016

UCA Revision #1: 8/14/06

UCA Revision #2: 7/30/07

LA

Psychology

Capital College (PSYC)

COBI MICHAEL, Program Coordinator, School of Behavioral Science and Education

The Psychology major emphasizes the scientific study of human behavior in areas such as cognition, development, learning, physiology, personality, and social processes. The curriculum is designed to provide students with a broad background in psychological theory and research and to develop the analytical and critical thinking skills necessary to be good consumers of scientific information.

The Psychology program exposes students to a number of areas of psychology but allows flexibility in the specific courses that are taken in each sub-area. Students are also required to obtain applied experience by completing an internship or by assisting faculty with their research. Elective credits can be used for additional internship or research experience.

The Psychology program prepares students for careers in local, state, and federal government and for entry-level psychological services positions in human service, applied behavior, human resources, and related fields. The Psychology program also provides a strong background for graduate education at both the master's and the doctoral level in counseling, social work, and many areas of psychology.

The Integrated Undergraduate Graduate (IUG) program is available for strong undergraduate students who wish to pursue a bachelor's and master's degree in five years. Psychology undergraduates may apply for admission to the IUG program in Applied Research Psychology by no later than February 15th the spring of their junior year after completing a minimum of 45 credits, if they meet the following admission requirements:

1. Grade point average of 3.50 or above cumulative.
2. Completion of undergraduate statistics and an undergraduate research course with an A- or above in both.
3. Completing 18 credits or more in psychology with a psychology GPA of 3.67 or above.
4. Typical successful candidates will obtain GRE scores of 146 or above on both the verbal and quantitative sections, with an analytical score of 3.5 or above.
5. Complete interviews with graduate faculty member.
6. Provide three professional letters of recommendation with at least two from academic references.

For a B.S. degree in Psychology, a minimum of 122 credits is required. Students admitted to the IUG program may apply 11 credits to their graduate and undergraduate degrees in psychology.

Entry to Major Requirements:

Entry to the Psychology major requires a 2.00 cumulative grade-point average and an average of C (2.00) or better in any courses already taken in the major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education Course Requirements in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES :

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 9 credits

REQUIREMENTS FOR THE MAJOR: 74 credits

(This includes 6 credits of General Education courses: 3 credits of GWS courses; 3 credits of GN courses.)

PRESCRIBED COURSES (10 credits) [\[1\]](#)

ENGL 202A GWS(3), PSYCH 100 GS(3) (Sem: 1-4)

PSYCH 301(4) (Sem: 4-5)

ADDITIONAL COURSES (46 credits) [\[1\]](#)

Select BISC 4 GN(3) or BIOL 141 GN(3) (Sem: 1-4)

(At least 15 credits of the following courses must be at the 400 level.)

Select 4 credits from: (Sem: 3-4)

Category 1 (Statistics) PSYCH 200 GQ(4) or STAT 200 GQ(4)

Select 6 credits from two different developmental categories (3 credits each category): (Sem: 2-8)

Category 2a (Lifespan) PSYCH 212 GS(3)

Category 2b (Adult) PSYCH 416(3)

Category 2c (Child) PSYCH 410(3)

Category 2d (Adolescence) PSYCH 412(3)

Select 6 credits from two different individual difference categories (3 credits each category) (Sem: 2-8)

Category 3a (Social Psychology) PSYCH 221 GS(3) or PSYCH 420(3)

Category 3b (Personality Psychology) PSYCH 238 GS(3) or PSYCH 438(3)

Category 3c (Personal Adjustment) PSYCH 243 GS(3) or PSYCH 471(3)

Category 3d (Health Psychology) PSYCH 441(3)

Select 6 credits from two different clinical categories (3 credits each category) (Sem: 5-8)

Category 4a (Physical Disabilities) PSYCH 370 US(3)

Category 4b (Childhood Disorders) PSYCH 476(3)

Category 4c (Abnormal Psychology) PSYCH 270(3) or PSYCH 470(3)

Category 4d (Behavior Modification) PSYCH 473(3)

Category 4e (Developmental Disabilities) PSYCH 443

Select 6 credits from two different experimental categories (3 credits each category) (Sem: 5-8)

Category 5a (Physiological Psychology) PSYCH 260(3) or PSYCH 462(3)

Category 5b (Cognitive Psychology) PSYCH 256 GS(3) or PSYCH 452 or PSYCH 456(3)

Category 5c (Learning Theory) PSYCH 261 GS(3) or PSYCH 461(3)

Select 3 credits from applications in psychology (Sem: 5-8)

Category 6 (Applied Experience) PSYCH 395(1-18) or PSYC 494(1-12)

Select 12 credits of any PSYCH courses not used above, with the exception that only one course selected from any Category 1 through 5 will count for the major (Sem: 2-8)

Students in the IUG program will take 11 credits of graduate work in their senior year, courses PSYC 500(3), PSYC 520(4) and PSYC 521(4). These 11 credits will apply to the graduate program and the undergraduate PSYCH elective undergraduate requirement.

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 6 credits from AAAS, AMST, ARAB, ART, ARTH, BRASS, CART, CMUS, CAMS, CAS, CHNS, CMLIT, COMM, DANCE, ELISH, ENGL, ENLSH, FR, GER, GREEK, HCOMM, HEBR, HIST, HUM, IHUM, INART, IT, JST, JAPNS, KOR, LATIN, LING, LIT, MEDVL, MUSIC, PHIL, PHILO, PHLOS, PORT, RLST, RUS, SPST, SPAN, STS, THEA, THTRE, WMNST 106N GH:US:IL(3), WMNST 101 GH:US(3), WMNST 102 GH:IL(3), WMNST 104 GH:US(3), WMNST 117 GH:US:IL(3), WMNST 137 GH:US:IL(3), WMNST 194 GH:US:IL(3), WMNST 205 US(3), WMNST 270(3), WMNST 407W US(3), WMNST 430 US(3), WMNST 438(3), WMNST 455 US(3), WMNST 462 US(3), WMNST 466 US:IL(3), WMNST 489(3), WMNST 490 US:IL(3), WMNST 491(3) (Sem: 1-8)

Select 12 credits from AAAS, AFRAS, ANTH, BESC, CRIMJ, ECON, HCM, HDF, PLSC, PUBPL, RSOC, SCLSC, SOSC, SOC, WMNST 100 GS:US:IL(3), WMNST 103

US(3), WMNST 110 GS;US(3), WMNST 116 GS;US;IL(3), WMNST 136 US(3), WMNST 202 GS;IL(3), WMNST 250 US(3), WMNST 423 US(3), WMNST 424 US(3), WMNST 426W US;IL(3), WMNST 428 US;IL(3), WMNST 452(3), WMNST 453 US(3), WMNST 456(3), WMNST 464 US(3), WMNST 471 US(3), WMNST 476(3) (Sem: 1-8)

Integrated B.S./M.A. in Applied Psychological Research

The Applied Research Psychology Program offers an integrated B.S./M.A. (IUG) program designed to allow academically superior psychology undergraduates to obtain both the bachelor's and M.A. degree within five years of study. The first three years of undergraduate coursework are the same as other psychology undergraduates, but the interested students apply for the IUG program in the spring of their junior year of study. If admitted to the IUG, the fourth year of study includes the graduate courses Ethics and Professional Practice in Psychology and Counseling (PSYC 500), Research Methods (PSYC 521) in the fall and Statistics (PSYC 521) in the spring. The IUG students then complete the remaining master's degree requirements in the fifth year, including the master's paper (PSYC 530). The integrated B.S./M.A. degree in Psychology meets the needs of the most academically talented students in the Psychology undergraduate major. A large proportion of the most academically talented students apply or wish to apply to graduate schools during their final year of undergraduate studies or soon after graduation. These students can benefit from the integrated degree because it provides a more challenging curriculum that allows them to accelerate their program of study to possibly receive an undergraduate and graduate degree within 5 years of study. Additionally, the integrated program can provide these students with a more cohesive program of study with opportunities to engage in more comprehensive research and clinical experience leading to both the Bachelor and Master's degree.

For the IUG in Applied Psychological Research, a minimum of 122 credits are required for the bachelor's degree and 35 credits for the M.A. degree. The graduate credits for PSYC 500, 521 and 520 (11 total credits) can apply to both the M.A. degree and as psychology electives for the bachelor's degree.

The objectives of the Integrated Undergraduate Graduate Program in Applied Research Psychology include:

1. To offer highly qualified students the opportunity to earn two degrees in five years. In particular, IUG students may count up to 12 credits towards both their B.S. and M.A. degree requirements.
2. To permit coherent planning of studies through the graduate degree, with advising informed by not only the requirements of the baccalaureate program, but also the longer-range goals of the graduate degree.
3. To introduce undergraduate students to the rigors of both graduate study and graduate faculty.
4. To make the resources of the Graduate School available to IUG students.
5. To allow students with IUG status to benefit from their association with graduate students whose level of work and whose intensity of interest and commitment parallel their own.
6. To allow students to coordinate as well as concurrently pursue the two degree programs, which enables them to achieve greater depth and comprehension than if the degrees are pursued sequentially.

Admission Requirements

To initiate the application process, students must submit an *Integrated Undergraduate-Graduate (IUG) Degree in Applied Research Psychology Application Form*, a transcript, and three letters of recommendation, with at least two from faculty members. A graduate faculty adviser will help undergraduate candidates determine a sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. Psychology undergraduates may apply for admission by no later than February 15th the spring of their junior year after completing a minimum of 45 credits, if they meet the following admission requirements:

1. Grade point average of 3.50 or above cumulative.
2. Completion of undergraduate statistics and an undergraduate research course with an A- (3.67) or above in both.
3. Completing 18 credits or more in psychology with a psychology GPA of 3.67 or above.
4. GRE scores are required for the IUG program. Typical successful candidates will obtain GRE scores of 146 or above on both the verbal and quantitative sections, with an analytical score of 3.5 or above.
5. Complete interviews with graduate faculty members.
6. Provide three professional letters of recommendation with at least two from academic references.

These admission standards are high, as it thought the program will only be appropriate for students with high levels of academic skills. The program area does have discretion in admitting psychology majors into the integrated program, and extenuating circumstances can always be considered in terms of possible admission. Individuals who are unable to be admitted in to the integrated program of study can apply for regular admission when they complete their program of study. These materials must be completed by the spring of the junior year to allow admission into the IUG program the following fall.

Sample Sequence of Graduate Coursework in Addition to Undergraduate Courses

Year	Fall (Senior UG)	Spring (Senior UG)	Summer
Year 1 (Senior Undergraduate Year) (11-14 graduate credits)	PSYC 520 Research Methods (4)* PSYC 500 Ethics and Professional Practice in Psychology and Counseling (3)*	PSYC 521 Statistics (4)*	PSYC 594 (3) if elected
Year 2 (21-24 graduate credits)	PSYC 501 Cultural Competency in Psychology (3) PSYC 594 Research (3) Elective (3)	PSYC 524 Biological Bases (3) PSYC 502 Applied Social Psychology (3) PSYC 530 Master's Paper (3)	Research or Elective (3) PSYC 530 Master's Paper (1-3)

* Applied to both undergraduate and graduate degree for a total of 11 credits.

If for any reason a student admitted to the B.S./M.A. program is unable to complete the requirement for the Master of Arts degree program in American Studies, the student will be permitted to receive the Bachelor's degree assuming all degree requirements have been satisfactorily completed.

As stated in the Graduate Bulletin, a minimum grade-point average of 3.00 for work done at the University is required for graduation and to maintain good academic standing. See http://bulletins.psu.edu/bulletins/whitebook/degree_requirements.cfm?section=masters

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-04-042

Review Date: 01/13/2015

UCA Revision #1: 9/1/06

UCA Revision #2: 7/30/07

Publications updated department head: 4/28/08

CL

Public Policy

Capital College (PUBPL): Penn State Harrisburg

PROFESSOR ALEXANDER SIEDSCHLAG, *Interim Program Coordinator, School of Public Affairs*

The Public Policy major is designed for students interested in policy issues, politics, public administration, and related areas like policy analysis and policy advocacy. The program explores a myriad of critical issues facing our communities, the nation, and the world. Students receive the educational foundation for careers in the public sector, in government-related businesses, and in non-profit organizations, as well as for graduate work in the fields of law, public administration, criminal justice, public policy, political science, and health care administration. Building on the program core, students may choose electives from a broad array of courses in public policy and other areas. Students may wish but are not required to pursue a concentration within the Public Policy major. The following concentrations are available: U.S. Public Policy; Law and Justice; and International Policy. Students should consult their adviser for a complete listing of courses in each of these concentrations. Overall, the Public Policy program seeks to advance the ideals of an active, informed citizenry and a commitment to public service.

Our proximity to the state capital at Harrisburg provides students with a rich environment for both study and for internships. In addition to our full-time faculty, Public Policy draws on part-time faculty with particular professional strengths. In recent years students have explored politics and political issues in classes taught by a state senator, a former lieutenant governor, a corrections system administrator, and a governor's press secretary. This integration of academic study with the "real world" of Pennsylvania politics and policy making is further enhanced through quality internships. The Public Policy program prides itself in placing qualified students in internships that facilitate the development of professional skills and promote the prospects for professional employment following graduation. Internship options include the Harrisburg Semester: Public Service Leadership Internships (PSLI). (For more information, see www.hbg.psu.edu/hbg/hburgsem.) Students are encouraged to complete an internship during their senior year. Additional information regarding internships may be obtained by contacting the Public Policy Internship Coordinator.

Admission Requirements for Transfer Students:

Transfer students must have a 2.00 or higher cumulative grade-point average. The evaluation of prior college work is done on an individual basis by the Office of Enrollment Services at Penn State Harrisburg.

Entry to Major Requirements:

Entry to the Public Policy major requires a 2.00 or higher cumulative grade-point average and an average of C (2.00) or better in any course already taken in the major.

For a B.S. degree in Public Policy, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 16 credits

REQUIREMENTS FOR THE MAJOR: 65 credits

(This includes 6 credits of General Education GS courses.)
(At least 15 credits must be at the 400 level.)

PRESCRIBED COURSES (15 credits) [\[1\]](#)

ECON 102 GS(3), ECON 104 GS(3), PLSC 1 GS(3), PLSC 309(3), PUBPL 304(3) (Sem: 1-6)

ADDITIONAL COURSES (18 credits)

Select 9 credits from the following: PLSC 300-499(3), PUBPL 241(3), PUBPL 300-499(3) (Sem: 1-8)

Select 6 credits from the following: PLSC 419(3), PLSC 425(3), PLSC 444(3), PLSC 488(3), PLSC 489(3), PUBPL 305(3) (Sem: 5-8)

Select 3 credits from the following: PUBPL 481(3), PUBPL 482(3), PUBPL 483(3), PUBPL 485(3), PUBPL 490(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (32 credits)

Select 12 credits from the following: ACCTG 200-499(3), AFRAS 300-499(3), AMST 300-499(3), BESC 300-499(3), COMMS 300-499(3), CRIMJ 300-499(3), ECON 300-499(3), ENVE 460(3), FIN 300-499(3), HIST 300-499(3), MGMT 300-499(3), MKTG 300-499(3), SCLSC 300-499(3), SOSC 300-499(3), SOC 300-499(3), SRA 211(3), WMNST 300-499(3) (Sem: 5-8)

Select 20 credits in consultation with an academic adviser and in support of the student's interests (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2008

Blue Sheet Item #: 36-05-018

Review Date: 2/26/08

UCA Revision: #2: 7/30/07

Coordinator updated: 6/5/12

CL

Professional Writing

Berks College (PWRIT)

The major is intended to prepare students to write effectively in a variety of workplace and academic settings. Methods of instruction draw upon the strategies and techniques of practicing writers outside of the University, including workshops, peer conferencing, collaborative writing, portfolio preparation, and internships. At the same time, theory courses provide the necessary background to help students understand and appreciate the larger issues surrounding the writing and reading of texts.

As a liberal arts degree, the Professional Writing major is appropriate for students who wish to develop a set of applied communication skills to prepare for a wide range of professional positions or for graduate or professional schools. The degree differs from most current English majors in at least three ways: 1) a practical orientation prepares graduates for employment, in addition to post-graduate English studies; 2) a multidisciplinary focus integrates courses from the liberal arts, business, and information technology; and 3) a required internship ensures that students actively apply their skills.

For the B.A. degree in Professional Writing, a minimum of 123 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

FIRST-YEAR SEMINAR

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

ELECTIVES: 15 credits

REQUIREMENTS FOR THE MAJOR: 39 credits [\[1\]](#)

PRESCRIBED COURSES (15 credits)

ENGL 211W(3) (Sem: 3-4)

ENGL 417(3), ENGL 471(3), ENGL 491(3), ENGL 495(3) (Sem: 5-8)

ADDITIONAL COURSES (24 credits)

Rhetorical Theory

Select 3 credits from the following:

ENGL 472(3), ENGL 473(3), ENGL 474(3) (Sem: 5-8)

Writing for Publication

Select 3 credits from the following:

COMM 260W(3), ENGL 215(3) (Sem: 5-8)

Workplace Writing

Select 3 credits from the following:

ENGL 418(3), ENGL 419(3)

Visual Design

Select 3 credits from the following:

ENGL 420(3), ENGL 480(3)

Advertising and Public Relations

Select 3 credits from the following:

COMM 320(3), COMM 370(3)

Creative Writing

Select 3 credits from the following:

ENGL 212(3), ENGL 213(3), ENGL 415(3)

Additional Writing Courses

Select 6 credits from the following

CAS 214(3), COMM 260W(3), COMM 320(3), COMM 370(3), ENGL 110(3), ENGL 212(3), ENGL 213(3), ENGL 215(3), ENGL 250(3), ENGL 415(3), ENGL 416(3), ENGL 418(3), ENGL 419(3), ENGL 420(3), ENGL 421(3), ENGL 472(3), ENGL 473(3), ENGL 474(3), ENGL 480(3) (Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2010

Blue Sheet Item #: 39-01-065

Review Date: 08/24/2010

BK

Rehabilitation and Human Services

Penn State Abington (RHSAB)

Penn State Berks (RHSBL)

University College: Penn State Hazleton, Penn State Lehigh Valley, Penn State Wilkes-Barre (RHSCC)

University Park, College of Education (RHS)

PROFESSOR JAMES HERBERT, *Undergraduate Program Coordinator*

This major helps prepare students for entry-level positions in a variety of human service settings, particularly settings that provide services to persons with physical, emotional, or mental disabilities. Graduates pursue employment in a variety of settings including rehabilitation centers, drug and alcohol programs, senior citizens centers, community mental health programs, programs for people with intellectual disabilities, corrections systems, and hospitals. Increasing opportunities are available in private for-profit insurance programs for the industrially injured, and in employee assistance programs within business and industry. Well-planned use of electives and internships allows for specialization. The full-semester (15-credit) internship is provided under the supervision of professionals in human service agencies. These intensive "hands-on" experiences are frequently avenues for employment since the internship is completed during the senior year. Students may not go on internship until they have successfully completed all other course work. Students are encouraged to participate in volunteer experiences that provide opportunities to work with people with disabilities. Students are encouraged to declare a minor in a related area and should be discussed with the student's adviser. The major also helps prepare students for graduate study in many human service professional disciplines such as rehabilitation counseling, school counseling, occupational therapy, physical therapy and social work.

Baccalaureate degree candidates must have a minimum 2.0 GPA to be admitted to the Rehabilitation and Human Services (RHS) major; thereafter, students must earn a C or better in all RHS required courses.

For the B.S. degree in Rehabilitation and Human Services, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12-14 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 17-20 credits

REQUIREMENTS FOR THE MAJOR: 70-72 credits

(This includes 12-14 credits of General Education courses: 6 credits of GS courses; 3-4 credits of GQ courses; 3-4 credits of GN courses.)

PRESCRIBED COURSES (55 credits)

PSYCH 100 GS(3), RHS 100 GS:US(3) (Sem: 1-4)

PSYCH 270(3), SOC 1 GS(3), SOC 119(4) (Sem: 1-6)

RHS 300(3)[1], RHS 301(3)[1], RHS 302(3)[1], RHS 303(3)[1], RHS 400(3)[1], RHS 401(3)[1], RHS 402(3)[1], RHS 403(3)[1], RHS 495A(15) (Sem: 5-8)

ADDITIONAL COURSES (9-11 credits)

EDPSY 10 GS(3), HDFS 239 GS(3), or PSYCH 212 GS(3) (Sem: 1-2)

Select 3-4 credits from ANTH 21 GN(3), BISC 1 GN(3), BISC 2 GN(3), BISC 3 GN(3), BISC 4 GN(3), BIOL 133 GN(3), BIOL 110 GN(4), or BIOL 141 GN(3) (Sem: 1-6)

STAT 100 GQ(3) or STAT 200 GQ(4) or EDPSY 101 GQ(3) (Sem: 1-6)

SUPPORTING AND RELATED COURSES (6 credits)

Select 6 credits from CRIM, BBH, HDFS, KINES, PSYCH, or SOC (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better in this course, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-05-082

Review Date: 02/19/2013

UCA Revision #1: 9/1/06

PIC updated: 2/13/12

ED

Risk Management

University Park, Smeal College of Business (R M)

PROFESSOR Austin J. Jaffe, Chair, Department of Risk Management

The Risk Management major prepares students for careers in a wide range of private industries and public service agencies involving such areas as operations, property development, financial strategy, and government. The major is integrative in nature by crossing traditional business boundaries while offering specific areas of study in actuarial science, enterprise risk management, and real estate. High profile risks are faced by leaders and managers up and down the corporate ladder and require specialized skills, knowledge and preparation. The Risk Management major prepares students for this along with a chance to study risk from three different perspectives by offering specialty courses along with a common pool of risk management courses. This structure assures that the students in the risk management major are equipped with the common tools of risk analysis while at the same time permitting the students to tailor the specifics of their training through the selection of a particular option.

ACTUARIAL SCIENCE OPTION: The courses in the Actuarial Science option stress the application of mathematical and statistical concepts to the measurement of life and other contingencies, while at the same time giving the student a broad understanding of the business environment. Students in the Actuarial Science option are encouraged to begin the series of professional examinations leading to Associateship and Fellowship in either the Society of Actuaries (A.S.A./F.S.A.) or the Casualty Actuarial Society (A.C.A.S./F.C.A.S.).

Entrance requirements to the Actuarial Science Option -- To be eligible for entrance into the Actuarial Science option, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy the following requirements for entrance:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4)[\[1\]](#); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); FIN 301(3)[\[1\]](#); MATH 140 GQ(4)[\[1\]](#); MATH 141(4)[\[1\]](#); MGMT 301(3)[\[1\]](#); and MKTG 301(3)[\[1\]](#); SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#). These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. A minimum cumulative grade point average of 3.20 prior to and through to the end of the semester during which the entrance to major process is carried out.

ENTERPRISE RISK MANAGEMENT OPTION: The Enterprise Risk Management Option prepares students to identify, quantify and qualify the regulatory, legal, financial and contractual aspects of enterprise risk; the management of such risks; and the application of risk financing techniques to control risk exposures in organizations. Emphasis is also placed on the understanding of the principles and risks underlying complex business contracts.

Entrance requirements to the Enterprise Risk Management Option --To be eligible for entrance into the Risk Management major and the Enterprise Risk Management Option, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy the following requirements for entrance:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the Bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4)[\[1\]](#); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); FIN 301(3)[\[1\]](#); MATH 110 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#); MGMT 301(3)[\[1\]](#); and MKTG 301(3)[\[1\]](#); SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#). These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu>).

REAL ESTATE OPTION: This option is designed to prepare the student for a wide range of professional opportunities in corporate real estate management, real estate brokerage, appraisal, property management, mortgage lending and banking, development, and governmental service.

Entrance requirements to the Real Estate Option --To be eligible for entrance into the Risk Management major and the General or Real Estate Options, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy the following requirements for entrance:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4)[\[1\]](#); ECON 102 GS(3); ENGL 15 GWS(3) or ENGL 30 GWS(3); FIN 301(3)[\[1\]](#); MATH 110 GQ(4)[\[1\]](#) or MATH 140 GQ(4)[\[1\]](#); MGMT 301(3)[\[1\]](#); and MKTG 301(3)[\[1\]](#); SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#). These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu>).

For the B.S. degree in Risk Management, a minimum of 120 credits is required (at least 15 credits must be taken at the 400 level).

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of Bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection.)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 11-14 credits

REQUIREMENTS FOR THE MAJOR: 73-76 credits
(This includes 12 credits of General Education courses: 3 credits of GWS courses; 6 credits of GQ courses; and 3 credits of GS.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 42 credits

PRESCRIBED COURSES (34 credits)
ACCTG 211(4)[\[1\]](#), ECON 102 GS(3), FIN 301(3)[\[1\]](#), MGMT 301(3)[\[1\]](#), MKTG 301(3)[\[1\]](#) (Sem: 1-4)
BA 342(3), BA 411(3), BLAW 341(3), ECON 104 GS(3), ENGL 202D GWS(3), MIS 204(3) (Sem: 5-8)

ADDITIONAL COURSES (4 credits)
SCM 200 GQ(4)[\[1\]](#) or STAT 200 GQ(4)[\[1\]](#) (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (4 credits)
Select 4 credits: Attainment of 12th credit level proficiency in a single foreign language (4 credits). Proficiency must be demonstrated by either examination or course work. (Sem: 1-4)

REQUIREMENTS FOR THE OPTION: 31-34 credits

ACTUARIAL SCIENCE OPTION: (34 credits)**PRESCRIBED COURSES** (28 credits)

MATH 140 GQ(4) [\[1\]](#), MATH 141 GQ(4) [\[1\]](#) (Sem: 1-2)
MATH 231(2) [\[1\]](#), STAT 414(3) [\[1\]](#) (Sem: 3-5)
RM 320(3) [\[1\]](#), RM 410(3) [\[1\]](#), RM 411(3) [\[1\]](#) (Sem: 5-6)
RM 412(3) [\[1\]](#), RM 430(3) [\[1\]](#) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

RM 401(3) [\[1\]](#) or RM 420(3) [\[1\]](#) (Sem: 7-8)
RM 415(3) [\[1\]](#); STAT 483(3) [\[1\]](#)

ENTERPRISE RISK MANAGEMENT OPTION: (31 credits)**PRESCRIBED COURSES** (21 credits)

BLAW 441(3) [\[1\]](#), FIN 406(3) [\[1\]](#), RM 301(3) [\[1\]](#), RM 320W(3) [\[1\]](#), RM 405(3) [\[1\]](#) (Sem: 6-8)
RM 440(3) [\[1\]](#), SCM 301(3) [\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (4 credits)

MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#) (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select six credits of supporting coursework from an approved department list. (Sem: 5-8)

REAL ESTATE OPTION: (31 credits)**PRESCRIBED COURSES** (18 credits)

RM 301(3) [\[1\]](#), RM 330W(3) [\[1\]](#), RM 450(3) [\[1\]](#), RM/FIN 460(3) [\[1\]](#), RM/FIN 470(3) [\[1\]](#), SCM 301(3) [\[1\]](#) (Sem: 6-8)

ADDITIONAL COURSES (7 credits)

MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#) (Sem: 1-2)
Select 3 credits [\[1\]](#) from FIN 406(3), RM 420(3), RM/BLAW 424(3), RM/BLAW 425(3), RM 480(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select six credits of supporting coursework from an approved department list. (Sem: 5-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-06-009

Review Date: 04/4/2017

Recreation, Park, and Tourism Management

University Park, College of Health and Human Development (RPTM)

PROFESSOR PETER NEWMAN, *Head of the Department*

The program prepares students for supervisory and administrative positions with park systems, environmental centers, commercial recreation and tourism agencies, golf courses, hospitals and assisted living facilities, private voluntary agencies, schools and colleges, and other commercial, nonprofit, and public organizations that provide recreation and leisure services. The program combines a broad educational foundation with specific courses designed to accommodate career interests in recreation, park, and tourism management. The program helps students gain the theoretical, managerial, technical, and experiential skills they need to become the next generation of leaders in the field. Additionally, students obtain 300 hours of real-world experience through our internship program. Students work full-time for twelve weeks with professionals in a setting of their choice.

Four (4) options are offered: (1) Commercial Recreation and Tourism Management, (2) Community Recreation Management, (3) Professional Golf Management, (4) Outdoor Recreation Management.

Students who have completed 29.1 credits with a 2.00 cumulative grade-point average are eligible for entrance into the major. First-year students are admitted directly into the Golf Management option at the University Park campus only. In addition to the University's academic requirements, each student admitted to the Golf Management option must have a playing proficiency represented by a minimum golf handicap of 12 or lower. This must be certified in writing by a PGA member or golf coach.

COMMERCIAL RECREATION AND TOURISM MANAGEMENT OPTION: This option focuses on management in the private/commercial, non-profit, and public sectors of recreation/leisure services. The private/commercial focus will be of interest to students seeking careers in a variety of commercial settings such as resorts; theme parks, convention centers; sports and fitness facilities, including arenas and stadiums; tourism promotion/planning agencies; and employee recreation departments within corporations. This focus will also appeal to students wishing to become entrepreneurs.

COMMUNITY RECREATION MANAGEMENT: For those interested in the community, public, or non-profit sectors, the Community Recreation Management Option prepares students for positions within municipal, state, and federal government agencies; recreation divisions of the armed services; YMCA agencies; United Way agencies; scouting organizations; university-affiliated units such as student unions, intramural and alumni services; and other non-profit organizations.

PROFESSIONAL GOLF MANAGEMENT OPTION: Accredited by the Professional Golfers' Association of America, the Professional Golf Management Option prepares students for careers in the golf industry. Students will be prepared to assess leadership and management principles including customer service, interpersonal skills, business communication, conflict resolution, time management, negotiating, project management, marketing, and community relations. In addition to the core curriculum, the program has a strong business focus and is drawn from several nationally recognized academic disciplines on campus.

OUTDOOR RECREATION MANAGEMENT OPTION: This option prepare students for careers in Outdoor Experiential Leadership (OEL) and/or Park Management and Environmental Interpretation (PMEI). The OEL track emphasizes outdoor experiential leadership, including wilderness experiences and personal development. The PMEI track focuses on natural and cultural history environmental interpretation and education and the social science of conservation. The third track provides a flexible route for students to combine parts of the OEL and PMEI to create a meaningful personalized set of courses that could include study abroad experiences and prepare students for international contexts of recreation management. The outdoor recreation option is of interest to students seeking employment in a variety of recreation and park venues (local, state, and national from urban to wilderness) offering outdoor activities and personal development to the public.

For the B.S. degree in Recreation, Park, and Tourism Management, a minimum of 120 credits is required.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. RPTM requires students to complete 24 credits for the major through courses taken at University Park. Courses taken at other Penn State campuses may not be counted toward this 24 credit minimum. For more information, check the Recommended Academic Plan for this major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(0-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 2-11 credits

REQUIREMENTS FOR THE MAJOR: 67-74 credits
(This includes 0-4 credits of General Education courses: 0-4 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 24 credits

PRESCRIBED COURSES (24 credits) [\[1\]](#)
RPTM 120 GS;US;IL(3), RPTM 220(3), RPTM 236(3) (Sem: 1-4)
RPTM 277 US(3), RPTM 390(3) (Sem: 5-8)
RPTM 410(3), RPTM 433 WAC(3) (Sem: 7-8)
RPTM 456(3) (Sem: 7-8)

REQUIREMENTS FOR THE OPTION: 43-50 credits

COMMERCIAL RECREATION AND TOURISM MANAGEMENT OPTION: (46-50 credits)

PRESCRIBED COURSES (25 credits) [\[1\]](#)
RPTM 101(3), RPTM 210(3), RPTM 394(1), RPTM 300 IL;WAC(3), RPTM 415(3), RPTM 495A(12)

ADDITIONAL COURSES (6-7 credits)
Select 6-7 credits from CAS 283(3) or CMPSC 203 GQ(4) and RPTM 370(3) [\[1\]](#) or RPTM 435 (3) [\[1\]](#)

SUPPORTING COURSES AND RELATED AREAS (15-18 credits)
Consult with an advisor to review course recommendations, Minors, and Certificate Programs. A minimum of 6 credits must be completed at the 400 level.

COMMUNITY RECREATION MANAGEMENT OPTION: (43-47 credits)

PRESCRIBED COURSES (22 credits) [\[1\]](#)
RPTM 101(3), RPTM 201(3), RPTM 334(3), RPTM 394(1), RPTM 495A(12)

ADDITIONAL COURSES (6-7 credits)
Select 6-7 credits from CAS 283(3) or CMPSC 203 GQ(4) and RPTM 370(3) [\[1\]](#) or RPTM 435 (3) [\[1\]](#)

SUPPORTING COURSES AND RELATED AREAS (15-18 credits)

Consult with an advisor to review course recommendations, Minors, and Certificate Programs. A minimum of 6 credits must be completed at the 400 level.

PROFESSIONAL GOLF MANAGEMENT OPTION: (43-45 credits)

PRESCRIBED COURSES (37 credits)

BLAW 243(3), BA 303(3), BA 304(3), HM 336(3), HM 466 US(3), RPTM 100S(2), RPTM 295A(3), RPTM 360(3), RPTM 395B(3), RPTM 495B(3), RPTM 495C(3), RPTM 495D(2), TURF 100(3) (Sem: 6-8)

ADDITIONAL COURSES (6-8 credits)

Select 3-4 credits from ACCTG 211(4) or HM 335(3)

Select 3-4 credits from STAT 100 GQ(3) or STAT 200 GQ(4) (Sem: 1-6)

OUTDOOR RECREATION MANAGEMENT OPTION: (49-50 credits)

PRESCRIBED COURSES (28 credits) [\[1\]](#)

RPTM 101(3), RPTM 320(3), RPTM 325(3), RPTM 330(3), RPTM 394(1) (Sem: 3-4)

RPTM 435(3), RPTM 495A(12) (Sem: 5-8)

ADDITIONAL COURSES (3-4 credits)

CAS 283(3) or CMPSC 203 GQ(4)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 18 credits in an Outdoor Recreation pathway. Consult with an advisor to review course recommendations and pathways. At least 6 credits in RPTM must be completed at the 400 level (not including core or prescribed courses).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-03-033

Review Date: 11/14/2017

UCA Revision #1: 9/1/06

HH

Rail Transportation Engineering

Altoona College (RTEAL)

The Bachelor of Science in Rail Transportation Engineering (RTEAL) will provide students with the necessary skills for careers in the rail freight and passenger transportation industries. The RTEAL degree provides a solid background in engineering design, but also focuses on the maintenance and management skills required by the rail industry. The program provides a breadth of knowledge in the major areas associated with the design, operation, and maintenance of rail systems, including the engineering of rail and track structures, basic rail operating practices and safety, wheel/track dynamics, construction and maintenance of railroad infrastructure, and basic railroad communications and signals. Laboratories are used throughout the RTEAL curriculum to provide students with experiences in the field with actual rail equipment, and extensive team-based laboratory activities are used to develop the leadership qualities that are essential of rail professionals. In order to prepare students for the occupational challenges associated with careers in the rail industry, careful and candid discussions of career possibilities and working environments typical of railway professionals are provided throughout the RTEAL program.

Entrance to Major Requirements:

All students applying for entrance to the RTEAL major must have at least a 2.0 cumulative GPA by the end of the semester prior to applying for entrance to the major and have completed, with a minimum grade of C: CHEM 110 GN(3), MATH 140 GQ(4), MATH 141 GQ(4), and PHYS 211 GN(4). These courses must be completed by the end of the semester during which the admission to major process is carried out.

For the B.S. degree in Rail Transportation Engineering, a minimum of 130 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(27 of these credits are included in the REQUIREMENTS FOR THE MAJOR) (See description of General Education in this bulletin.)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 112 credits

(This includes 27 credits of General Education courses: 9 credits of GWS, 6 credits of GQ, 9 credits of GN, 3 credits of GS.)

PRESCRIBED COURSES (100 credits)

CHEM 110 GN(3)[\[1\]](#), ECON 102 GS(3), EDGNS 100(3), MATH 140 GQ(4)[\[1\]](#), MATH 141 GQ(4)[\[1\]](#), PHYS 211 GN(4)[\[1\]](#)(Sem: 1-2)
 CE 310(3), EMCH 211(3)[\[1\]](#), EMCH 212(3)[\[1\]](#), EMCH 213(3)[\[1\]](#), ENGL 202C GWS(3), GEOSC 1(3), MATH 220(2), MATH 251(4), PHYS 212 GN(4), STAT 401(3)
 (Sem: 3-4)
 CE 335(3)[\[1\]](#), CE 336(4)[\[1\]](#), CE 360(3), RTE 301(3), RTE 302(3)[\[1\]](#), RTE 303(3)[\[1\]](#), RTE 305(3)[\[1\]](#), RTE 402(3) (Sem: 5-6)
 ACCTG 211(4), CE 332(3)[\[1\]](#), CE 333(3)[\[1\]](#), CE 340(3)[\[1\]](#), RTE 403(3), RTE 404(3), RTE 406(4) (Sem: 7-8)

ADDITIONAL COURSES (12 credits)

ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
 CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 1-2)
 Select 3 credits from CMPSC 201(3) or CMPSC 202(3) (Sem: 3-4)
 Select 3 credits of technical electives from departmental list in consultation with advisor(Sem: 7-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2010

Blue Sheet Item #: 39-03-002

Review Date: 11/9/2010

Russian

University Park, College of the Liberal Arts (RUS)

PROFESSOR Irina Mikaelian, *Director*

The B.A. in Russian provides the student with a command of spoken and written Russian and a general knowledge of the literature and culture of the Russian people. No previous study of Russian is required for admission to the major. Study in Russia under the University's Education Abroad Program is available for qualified students. Students are advised to combine their study of Russian with another foreign language, English, history, political science, the Russian Area Studies minor, the Business/Liberal Arts minor, or the Linguistics minor. Graduates of this program have found employment in international business, the U.S. government, in the educational and publishing fields, and in the travel industry.

For the B.A. degree in Russian, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 23 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 28 credits [\[1\]](#)

PRESCRIBED COURSE (13 credits)
RUS 100 GH;IL(3) (Sem: 1-4)
RUS 200 IL(4) (Sem: 4-5)
RUS 400 IL(3), RUS 405 IL(3) (Sem: 6-8)

ADDITIONAL COURSES (15 credits)
Select 3 credits from RUS 401(3), RUS 402(3), or RUS 403(3) (Sem: 4-7)
Select 9 credits at the 400-level (Sem: 4-8)
Select 3 credits from RUS 141W IL(3) or RUS 142Y IL(3) (Sem: 5-8)

Integrated Undergraduate-Graduate (IUG) Degree Program B.A. in Russian and Master of International Affairs (M.I.A.)

The integrated undergraduate-graduate (IUG) degree program (B.A. in Russian/M.I.A. in International Affairs) provides an opportunity for strong students in these majors to complete a master's degree with 5 total years of study.

An increasingly globalized economy is likely to escalate the demand for graduate training in international affairs. The career choices for graduates with this training will also expand sharply. The integrated degree program prepares students for a variety of careers requiring an interdisciplinary background in Russian and international affairs. Examples of types of entities hiring in these areas are federal, state, and local governments, international organizations, multinational corporations, international banking and financial institutions, media organizations and journalism, consulting firms, policy research centers, and development assistance programs and foundations. The School of International Affairs (SIA) Master of International Affairs (M.I.A.) represents a professional degree designed to prepare students to thrive in these increasingly global career paths.

Admission Requirements

Admission requirements listed here are in addition to requirements stated in the [GENERAL INFORMATION](#) section of the *Graduate Bulletin*.

The number of openings in the integrated B.A./M.I.A. program is limited. Admission will be selective based on specific criteria set by the School of International Affairs. Students shall be admitted to an IUG program no earlier than the beginning of the third semester of undergraduate study at Penn State (regardless of transfer or AP credits accumulated prior to enrollment) and no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree, as specified in the proposed IUG plan of study. Students must be admitted to the program prior to taking the first course they intend to count towards the graduate degree. Specific requirements:

1. Must be enrolled in the Russian B.A. program.
2. Must apply to and be accepted into The Graduate School and the M.I.A. program in the School of International Affairs. Students must complete the [Graduate School application](#). All applicants will submit GRE scores, two letters of recommendation, and a personal statement addressing their reasons for pursuing a graduate degree in international affairs and discussing their plans and goals.
3. Although the program has no fixed minimum grade point average, an applicant is generally expected to have a minimum overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
4. Must include a plan of study identifying undergraduate credits to be applied to the M.I.A. degree elective requirements. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
5. Must provide written endorsement from the head of Germanic and Slavic Languages and Literatures.

M.I.A. Requirements for the Integrated B.A./M.I.A.

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the *Graduate Bulletin*.

M.I.A. portion of the integrated B.A./M.I.A. will require the completion of a minimum of 42 graduate credits, at least 18 of which are from six core courses consisting of INTAF 801(3), 802(3), 803(3), 804(3), 506(3) and INTAF 590(3). The remaining credits are attained through completion of the approved elective courses. A minimum of 6 credits must be at the 500-level.

In addition to the core curriculum and elective courses, M.I.A. degree candidates must complete either: (i) a master's paper; or (ii) a supervised internship placement. If the first option is chosen and the candidate opts to complete a paper, he/she must complete 3 credits of INTAF 594. The master's paper will involve integrating and showing mastery of the subject matter of the student's curricular emphasis, and may also involve original research. If the second option is chosen, the candidate will complete 3 credits of INTAF 595. The student will participate in a supervised internship of sufficient depth and professionalism that will allow the student to experience the integration of his/her curricular studies in an actual professional environment. A reflective paper will be submitted as a part of this credit requirement.

In order to graduate, M.I.A. degree students also will need to demonstrate proficiency in a language other than English. Proficiency will be defined as follows: (i) four semesters of a Penn State language sequence or its equivalent (15 credits with a quality grade of B or better using a 4.0 scale); (ii) native

acquisition, as shown by the candidate's personal history and approved by the SIA faculty; or (iii) performance on a proficiency evaluation sufficient to equal four semesters of language learning: for this purpose, either Penn State's proficiency certification process or another pre-approved proficiency assessment may be used. Language study does not provide credits towards the M.I.A. degree.

If students accepted into the IUG program are unable to complete the M.I.A. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

M.I.A. Degree	Integrated B.A./M.I.A. Degree
Core Courses (18)	Core Courses (18)
INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 5065(3), INTAF 590(3)	INTAF 801(3), INTAF 802(3), INTAF 803(3), INTAF 804(3), INTAF 506(3), INTAF590(3)
Electives (21)	Electives (21)
Course choices are from a pre-approved list in the SIA, or by SIA faculty-approved substitution.	A maximum of 12 credits may be double counted toward the B.A. and the M.I.A. The list of courses that can double count includes RUS 400, RUS 405, RUS 406, RUS 412, RUS 494, RUS 501 and RUS 525.
Capstone (3)	Capstone (3)
Master's Paper (INTAF 594) or Internship (INTAF 595)	Master's Paper (INTAF 594) or Internship (INTAF 595)
Total Degree Credits (42)	Total Degree Credits (42)

The list of courses that can double count includes RUS 400, RUS 405, RUS 406, RUS 412, RUS 494, RUS 501, and RUS 525. No more than 6 of the double-counted credits may be at the 400-level. The graduate thesis or other graduate culminating/capstone experience (including any associated credits and/or deliverables) may not be double counted towards any other degree.

Tuition Charges, Grant-in-Aid, and Assistantships

Students admitted to the School of International Affairs through the IUG with Russian may be considered to receive financial assistance. Students on graduate assistantships must adhere to the [course load limits set forth in the Graduate Bulletin](#).

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-049

Review Date: 4/5/2016

LA

**PROGRAM CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS**
Begin Date of Enrollment Hold: April 8, 2011

Russian Translation

University Park, College of the Liberal Arts (RUS T)

SENIOR LECTURER IRINA MIKAELIAN, *Director*

This major is designed to offer, within the context of a liberal education, specialized skills in translation from the Russian language. The curriculum is career-oriented and requires competence in a field or fields in addition to the language skill. Students will select such a field or fields in accordance with their special interests and in consultation both with the adviser and with persons directly involved with the field chosen.

For the B.S. degree in Russian Translation, a minimum of 124 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 20 credits

REQUIREMENTS FOR THE MAJOR: 59-71 credits^[1]

PRESCRIBED COURSES (17 credits)
RUS 204 IL(4), RUS 214 IL(4), RUS 304 IL(3), RUS 400 IL(3), RUS 412 IL(3) (Sem: 3-8)

ADDITIONAL COURSES (18 credits)
Select 3 credits from each category:
a. ENGL 415(3), ENGL 416(3), ENGL 417(3), ENGL 418(3), ENGL 419(3), ENGL 421(3), or CMLIT 410(3) (Sem: 5-8)
b. HIST 141 GH(3), or HIST 434 IL(3) (Sem: 3-8)
c. RUS 100 GH;IL(3), RUS 110 GH;IL(3), RUS 141W IL(3), or RUS 142Y IL(3) (Sem: 5-8)
d. PL SC 413(3) (Sem: 7-8)
e. RUS 427 IL(3) (Sem: 7-8)
f. RUS 460 IL(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (24-36 credits)
Proficiency in Russian must be demonstrated by either course work or examination equivalent to the completion of 12 credits of course work (0-12) (Sem: 3-6)
Select a minimum of 24 credits in a field (or fields) in which the student plans to specialize as a translator (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2002

Blue Sheet Item #: 30-01-036

Review Date: 1/20/04

UCA Revision #2: 7/30/07

LA

Science

Abington College (SCIAB)
 Altoona College (SCIAL)
 Berks College (SCIBL)
 Capital College (SCICA)
 University College (SCICC): Penn State Worthington-Scranton, Penn State York
 University Park, Eberly College of Science (SC BS)
 Integrated Five-Year Science/Business M.B.A. Program (SCBUS)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR RONALD MARKLE, *in charge*

The Science major is an interdisciplinary degree that aims to provide a broad, general education in science. The bachelor of science (B.S.) curriculum is designed specifically for students who have education goals relating to scientific theory and practice and who require a high degree of flexibility to obtain their educational objectives. After completing foundation courses in calculus, chemistry, physics, and the life sciences, students will select additional science courses from designated areas. A large number of supporting credits permit students to readily include significant breadth or specialization into their undergraduate curriculum. Some examples include minors in business, computer and information science, education, kinesiology, or other fields. The degree allows students throughout the Commonwealth to become familiar with both the theory and the practice of science. It can help prepare students for various careers in pharmaceutical, biotechnical, chemical, medical, and agricultural industries. The degree can also be tailored to meet the specific requirements of professional programs such as medical, dental, or pharmacy schools. The General Science option of the B.S. Science degree allows for the most flexibility. Achievement in a more specialized set of goals can be met by selecting one of the other B.S. options offered: the Biological Sciences and Health Professions option, the Legal Studies, Government Service, Public Policy option, the Life Sciences option, the Mathematical Sciences option, or the Physical Sciences option. Not all of these options are available at all locations, and there are minor distinctions of the core curriculum at some locations, so see the Science program director at your College for further details.

In order to be eligible for entrance to the Science major, a student at any location must have: 1) attained at least a 2.00 cumulative grade-point average; 2) completed MATH 140 GQ(4) with a grade of C or better; 3) completed at least two of the following courses, BIOL 110 GN(4); CHEM 110 GN(3); PHYS 211 GN(4) or PHYS 250 GN(4), with a grade of C or better.

For the B.S. degree in Science, a minimum of 124 credits is required, with at least 15 credits at the 400 level.

TWO-YEAR PREPROFESSIONAL PREPARATION: The first two years of the Science major (62 credits) can meet the pre professional needs of those interested in admission to some schools of pharmacy, physical therapy, optometry, nursing, and physician assistant training. Successful students can then transfer after two years of undergraduate study to the professional school to which they are admitted. Note, however, that no Penn State degree can be awarded after only two years (62 credits) of study in the Science major. Also, note that the abbreviated two-year curriculum alone does not prepare students for admission to professional schools of general medicine, veterinary medicine, or dental medicine. Consult with your college's health sciences professional adviser for additional information.

ACCELERATED SCIENCE B.S./M.B.A. PROGRAM: Students admitted to this special cooperative program between the Eberly College of Science and The Smeal College of Business will be able to combine a Bachelor of Science degree in the Science major, with a Master of Business Administration degree. Highly motivated students, who enter the University with a sufficient number and proper distribution of AP credits, will have the opportunity to complete the requirements for both programs within five years. The B.S. degree in the Science major General Science option, will be conferred upon satisfactory completion of:

1. A minimum of 112 acceptable undergraduate credits, which must include:

- (24 credits) The University's General Education requirements in the areas of Writing and Speaking (9), Health and Physical Activity (3), Arts (6), Humanities (6). The University's General Education requirements in the areas of Quantification, Natural Sciences, and Social and Behavioral Sciences will be satisfied by course work listed under headings "c" and "f".
- The University's First-Year Seminar, United States Cultures, International Cultures, and Writing Across the Curriculum requirements. (Note: These requirements may be double counted in order to satisfy other requirements in the program.)
- (52-57 credits) BIOL 110 GN(4), CHEM 110 GN(3), CHEM 111(1), CHEM 112 GN(3), CHEM 113 GN(1), CMPSC 203 GQ(4), MATH 140 GQ(4), MATH 141 GQ(4); 3-4 credits from STAT 200 GQ(4), or STAT 250 GQ(3) or STAT 301(3) or STAT 401(3); 8-12 credits from PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2), or PHYS 250 GN(4), PHYS 251 GN(4); 3 additional life science credits from B M B 211(3), B M B 251(3), or MICRB 201(3); and 14 additional credits of course work from the Eberly College of Science, with at least nine credits at the 400 level.
- (0-8 credits) Demonstration of second semester proficiency in a single foreign language.
- (3-9 credits) SC 295(1-3), SC 395(1-3), SC 495(1-3) (Note: Students must complete three Eberly College of Science Cooperative Education experiences, including at least one experience which is a full semester in length.)
- (10 credits) ECON 102 GS(3), ECON 104 GS(3), ACCTG 211(4)
- (4-23 credits) Supporting courses and related areas selected from the program list.

2. The first semester of course work in The Smeal College of Business M.B.A. program (i.e., a minimum of 12 graduate credits).

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
 (See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in GENERAL EDUCATION course selection or SUPPORTING COURSES AND RELATED AREAS)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection or SUPPORTING COURSES AND RELATED AREAS)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR or SUPPORTING COURSES AND RELATED AREAS)

REQUIREMENTS FOR THE MAJOR: 94 credits

(This includes 15 credits of General Education courses; 9 credits of GN courses; 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR MAJOR (All options)

PRESCRIBED COURSES (20 credits)

CHEM 110 GN(3) [11](#), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4) [11](#), MATH 141 GQ(4) (Sem: 1-2)
 BIOL 110 GN(4) [11](#) (Sem: 1-4)

REQUIREMENTS FOR THE OPTIONS: 74 credits

GENERAL SCIENCE OPTION: (74 credits)

ADDITIONAL COURSES (15-20 credits)

Select 4 credits from BIOL 129 GN(4), BIOL 220W(4), BIOL 230W(4), BIOL 240W(4) or BIOL 141 GN(3) and BIOL 142(1) (Sem: 3-4)

Select 3-4 credits from STAT 200 GQ(4), or STAT 250 GQ(3) or STAT 301(3) or STAT 401(3) (Sem: 3-4)

Select 8-12 credits from PHYS 211 GN(4) [11](#), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4) [11](#), PHYS 251 GN(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (54-59 credits)

(A maximum of 12 credits of Independent Study [296, 496] may be applied toward credits for graduation.)

Select 21-26 credits from program list (Students may apply 6 credits of ROTC.) (Sem: 1-8)

Select 3 credits from earth and mineral sciences (Sem: 3-8)
 Select 18 credits in life, mathematical, or physical sciences, with at least 9 credits [\[11\]](#) at the 400 level [\[60\]](#) (Sem: 3-8)
 Select 3 credits in Global, Social and Personal Awareness from department approved course list in consultation with adviser (Sem: 3-8)
 Select 3 credits in Teamwork and Interpersonal Communication from department approved course list in consultation with adviser (Sem: 3-8)
 Select 6 credits of 400-level courses (Sem: 5-8)

BIOLOGICAL SCIENCES AND HEALTH PROFESSIONS OPTION: (74 credits)**PRESCRIBED COURSES (3 credits)**

H P A 101(3) (Sem: 3-6)

ADDITIONAL COURSES (24-31 credits)

Select 4 credits from BIOL 129 GN(4), BIOL 220W(4), BIOL 230W(4), BIOL 240W(4) or BIOL 141 GN(3) and BIOL 142(1) (Sem: 3-4)
 Select 3-4 credits from STAT 200 GQ(4), or STAT 250 GQ(3) or STAT 301(3) or STAT 401(3) (Sem: 3-4)
 Select 6-8 credits from CHEM 210(3), CHEM 212(3), CHEM 213(2) or CHEM 202(3), CHEM 203(3) (Sem: 3-6)
 Select 3 credits from B M B 211(3), B M B 251(3), MICRB 201(3), BIOL 222(3), or BIOL 322(3) (Sem: 3-6)
 Select 8-12 credits from PHYS 211 GN(4) [\[11\]](#), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4) [\[11\]](#), PHYS 251 GN(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (40-47 credits)

(A maximum of 12 credits of Independent Study [296, 496] may be applied toward credits for graduation.)
 Select 15 credits from program list for Healthcare/ Medicine/Ethical Competencies; 6 credits must be at the 400-level (Sem: 3-8) Select from department approved course list in consultation with adviser.
 Select 10-17 credits from program list (Students may apply 6 credits of ROTC. (Sem: 1-8)
 Select 3 credits in Global, Social and Personal Awareness from department approved course list in consultation with adviser (Sem: 3-8)
 Select 3 credits in Teamwork and Interpersonal Communication from department approved course list in consultation with adviser (Sem: 3-8)
 Select 9 credits [\[11\]](#) of 400-level B M B, BIOL, BIOTC, or MICRB courses (Sem: 5-8)

LEGAL STUDIES, GOVERNMENT SERVICE, PUBLIC POLICY OPTION (74 credits)**ADDITIONAL COURSES (15-20 credits)**

Select 4 credits from BIOL 129 GN(4), BIOL 220W(4), BIOL 230W(4), BIOL 240W(4) or BIOL 141 GN(3) and BIOL 142(1) (Sem: 3-4)
 Select 3-4 credits from STAT 200 GQ(4), or STAT 250 GQ(3) or STAT 301(3) or STAT 401(3) (Sem: 3-4)
 Select 8-12 credits from PHYS 211 GN(4) [\[11\]](#), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4) [\[11\]](#), PHYS 251 GN(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (54-59 credits)

Select 12-17 credits from program list (Students may apply 6 credits of ROTC. (Sem: 1-8)
 Select 18 credits in life, mathematical, or physical sciences, with at least 9 credits [\[11\]](#) at the 400 level [\[60\]](#) (Sem: 3-8)
 Select 18 credits from program list for Legal Studies, Government Service, Public Policy; 6 credits must be at the 400-level (Sem: 3-8) Select from department approved course list in consultation with adviser.
 Select 3 credits in Global, Social and Personal Awareness from department approved course list in consultation with adviser (Sem: 3-8)
 Select 3 credits in Teamwork and Interpersonal Communication from department approved course list in consultation with adviser (Sem: 3-8)

LIFE SCIENCE OPTION: (74 credits)**ADDITIONAL COURSES (24-30 credits)**

Select 4 credits from BIOL 220W GN(4), BIOL 230W GN(4), BIOL 240W GN(4) (Sem: 3-4)
 Select 3 credits from CMPSC 101 GQ(3), MATH 250(3), or STAT 250 GQ(3) (Sem: 3-4)
 Select 3 credits from B M B 211(3), B M B 251(3), or MICRB 201(3) (Sem: 3-4)
 CHEM 202(3), CHEM 203(3); or CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-6)
 PHYS 211 GN(4) [\[11\]](#), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4) [\[11\]](#), PHYS 251 GN(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (44-50 credits)

(A maximum of 12 credits of Independent Study [296, 496] may be applied toward credits for graduation.)
 Select 23-29 credits from program list (Students may apply 6 credits of ROTC.) (Sem: 1-8)
 Select 3 credits in Global Social and Personal Awareness
 Select 3 credits in Teamwork and Interpersonal Communication
 Select 6 credits of 400-level courses (Sem: 5-8)
 Select 9 credits [\[11\]](#) of 400-level B M B, BIOL, BIOTC, or MICRB courses (Sem: 5-8)

MATHEMATICAL SCIENCE OPTION: (74 credits)**PRESCRIBED COURSES (5-6 credits)**

CMPSC 122(3), MATH 220 GQ(2-3) (Sem: 3-6)

ADDITIONAL COURSES (24-29 credits)

Select 3 credits from B M B 211(3), B M B 251(3), or MICRB 201(3) (Sem: 3-4)
 CMPSC 121 GQ(3), CMPSC 201 GQ(3), or CMPSC 202 GQ(3) (Sem: 3-6)
 MATH 230(4) or MATH 251(4) (Sem: 3-6)
 CMPSC 360(3) or MATH 311W(3-4); STAT 301 GQ(3) or STAT 318(3) (Sem: 3-8)
 PHYS 211 GN(4) [\[11\]](#), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4) [\[11\]](#), PHYS 251 GN(4) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (39-45 credits)

(A maximum of 12 credits of Independent Study [296, 496] may be applied toward credits for graduation.)
 Select 18-24 credits from program list (Students may apply 6 credits of ROTC.) (Sem: 1-8)
 Select 9 credits [\[11\]](#) of 400-level CMPSC, CSE, MATH, or STAT courses (Sem: 5-8)
 Select 6 credits of 400-level courses (Sem: 5-8)
 Select 3 credits in Global, Social & Personal Awareness
 Select 3 credits in Teamwork & Interpersonal Communication

PHYSICAL SCIENCE OPTION: (74 credits)**PRESCRIBED COURSES (15 credits)**

ASTRO 291 GN(3), PHYS 211 GN(4) [\[11\]](#), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2) (Sem: 3-6)

ADDITIONAL COURSES (16-18 credits)

Select 3 credits from B M B 211(3), B M B 251(3), or MICRB 201(3) (Sem: 3-4)
 CHEM 202(3), CHEM 203(3); or CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-6)
 MATH 230(4) or MATH 251(4) (Sem: 3-6)
 Select 3 credits from ASTRO 292 GN(3); E MCH 211(3); M E 300(3); or PHYS 237(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (41-43 credits)

(A maximum of 12 credits of Independent Study [296, 496] may be applied toward credits for graduation.)
 Select 20-22 credits from program list (Students may apply 6 credits of ROTC.) (Sem: 1-8)
 Select 6 credits of 400-level courses (Sem: 5-8)
 Select 9 credits [\[11\]](#) of 400-level ASTRO, CHEM, or PHYS courses (Sem: 5-8)
 Select 3 credits in Global, Social & Personal Awareness
 Select 3 credits in Teamwork & Interpersonal Communication

[11] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[60] Physical sciences include ASTRO, CHEM, PHYS; mathematical sciences include CMPSC, MATH, STAT; life sciences include BIOL, BIOTC, B M B, MICRB.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-001

Review Date: 08/23/2016

UCA Revision #1: 9/1/06

UCA Revision #2: 7/730/07

SC

Supply Chain and Information Systems

University Park, Smeal College of Business (SC&IS)

PROFESSOR JOHN E. TYWORTH, *Chair of the Department of Supply Chain and Information Systems*

The SC&IS major concentrates on the management of value-creating supply chain networks that modern business enterprises use to acquire, produce, and deliver goods and services all over the world and on information technology as the key enabler of supply chain integration. Students learn how to analyze and design supply chains and manage core business processes including (1) sourcing and procuring raw materials, (2) manufacturing and service operations, and (3) planning and fulfilling customer demand. Students also develop knowledge, skills, and abilities in the information systems area, including information processing, databases, information systems design and analysis, and supply chain technologies.

Graduates are well-prepared for careers in the supply chain and information systems area in both industry and government, including manufacturing, service, technology, and merchandising companies, third-party logistics providers, transport system enterprises, consulting firms, and government agencies.

More information about the broad range of career opportunities is available at

<http://www.smeal.psu.edu/scis/recruit>

Entrance Requirement: To be eligible for entrance into the Supply Chain and Information Systems (SC&IS) major, a degree candidate must be enrolled in the Smeal College of Business or the Division of Undergraduate Studies and satisfy requirements for entrance to the major.

Specific entrance requirements include:

1. The degree candidate must be taking, or have taken, a program appropriate for entry to the major as shown in the bulletin, including approximately 60 credits of course work.
2. Complete the following entrance to major requirements: ACCTG 211(4) [\[1\]](#); ECON 102 GS(3); SCM 200 GQ(4) [\[1\]](#) or STAT 200 GQ(4) [\[1\]](#); ENGL 15 GWS(3) or ENGL 30 GWS(3); and MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#); FIN 301(3) [\[1\]](#); MGMT 301(3) [\[1\]](#); and MKTG 301(3) [\[1\]](#). These courses must be completed by the end of the semester during which the entrance to major process is carried out.
3. In addition to the above requirements, the Executive Vice President and Provost of the University may approve administrative enrollment controls that limit the number of students who are admitted to majors in the Smeal College of Business. In each case, however, academic requirements are established for admission. For information on enrollment controls, consult the Smeal College of Business Web site (<http://www.smeal.psu.edu>).

For the B.S. degree in Supply Chain and Information Systems, a minimum of 120 credits is required (at least 15 credits must be taken at the 400 level).

GENERAL EDUCATION: 45 credits

(12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 14 credits

REQUIREMENTS FOR THE MAJOR: 73 credits

(This includes 12 credits of General Education courses: 3 credits of GWS courses; 6 credits of GQ courses; 3 credits of GS courses.)

PRESCRIBED COURSES (52 credits)

ACCTG 211(4) [\[1\]](#), ECON 102 GS(3), FIN 301(3) [\[1\]](#); MGMT 301(3) [\[1\]](#); and MKTG 301(3) [\[1\]](#) (Sem: 1-4)

MIS 204(3), SCM 301(3) [\[1\]](#) (Sem: 3-5)

BA 342(3), BA 411(3), BLAW 341(3), ECON 104 GS(3), ENGL 202D GWS(3), SCM 404(3) [\[1\]](#), SCM 405(3) [\[1\]](#), SCM 406(3) [\[1\]](#), SCM 421(3) [\[1\]](#), SCM 450(3) [\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (8 credits)

MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#) (Sem: 1-2)

SCM 200 GQ(4) [\[1\]](#) or STAT 200 GQ(4) [\[1\]](#) (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS (13 credits)

Select 4 credits: Attainment of 12th-credit-level proficiency in a single foreign language. (4 credits) Proficiency must be demonstrated by either examination or coursework (Sem: 1-4)

Select 3 credits of related coursework. See department list. (Sem: 5-8)

Select 6 credits of supporting coursework. See department list. (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2010

Blue Sheet Item #: 38-06-046

Review Date: 04/13/2010

UCA Revision #1: 8/14/06

BA

Science

Penn State Erie, The Behrend College (SCNBD)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

This interdisciplinary major provides a broad, general education in science. The B.S. degree major includes options in General Science and Environmental Studies, and in Earth and Space Science Pre-certification and General Science Pre-certification for teaching. The curriculum is designed for students who have educational goals not readily met by one of the science majors or for those who require a high degree of flexibility to attain their educational objectives. After completing foundation courses in calculus, chemistry, computer science, the life sciences, and physics, students select additional science courses from designated areas. A large number of supporting credits will permit students to include a minor or course sequences in business, education, technical writing, or other fields.

For the B.S. degree in Science, a minimum of 120 credits is required, with at least 15 credits at the 400 level. Each student must earn at least a grade of C in each 300- and 400-level prescribed, additional, and supporting course.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES (0-1 credit)

REQUIREMENTS FOR THE MAJOR: 89-90 credits[\[80\]](#)

(This includes 15 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 44-46 credits

PRESCRIBED COURSES (24 credits)

BIOL 110 GN(4)[\[11\]](#) (Sem: 1-4)

CHEM 110 GN(3)[\[11\]](#), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4)[\[11\]](#), MATH 141 GQ(4) (Sem: 1-2)

CMPSC 121(3) (Sem: 1-4)

ADDITIONAL COURSES (12-14 credits)

PHYS 211 GN(4)[\[11\]](#), PHYS 212 GN(4), PHYS 213 GN(2) or PHYS 214(2); or PHYS 250 GN(4)[\[11\]](#), PHYS 251 GN(4) (Sem: 3-6)

Select 4 credits from BIOL 220W GN(4), BIOL 230W GN(4), BIOL 240W GN(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (8 credits)

Select 8 credits in a foreign language (proficiency demonstrated by examination or course work to the level of the second semester; if fewer than 8 credits are needed to reach the required proficiency, students choose selections from program list to total 8 credits) (Sem: 1-8)

REQUIREMENTS FOR THE OPTION: 43-46 credits[\[81\]](#)

GENERAL SCIENCE OPTION: (43-46 credits)

ADDITIONAL COURSES (3-4 credits)

Select 3-4 credits from CMPSC 122 GQ(3), MATH 230(4), MATH 250(3), or STAT 200 GQ(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (39-43 credits)

Select 3 credits from geosciences[\[79\]](#) (Sem: 1-8)

Select 18 credits, with at least 9 credits at the 400 level, in one of the areas: computer sciences, life sciences, mathematical sciences, or physical sciences[\[79\]](#) (Sem: 3-8)

Select 18-22 credits, with at least 6 credits at the 400 level, from program list (Students may apply 6 credits of basic ROTC.) (Sem: 1-8)

ENVIRONMENTAL STUDIES OPTION: (43-46 credits)

PRESCRIBED COURSES (7 credits)

BIOL 402(3), GEOG 160 GS(3), GEOG 161(1) (Sem: 3-8)

ADDITIONAL COURSES (9-11 credits)

Select 3-4 credits from BIOL 220W GN(4), BIOL 230W GN(4), BIOL 240W GN(4), or MICRB 201 GN(3) (Sem: 3-6)

CHEM 202(3) or CHEM 221(4) (Sem: 3-6)

STAT 200 GQ(3) or STAT 250 GQ(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (25-30 credits)

Select 6 credits from geosciences[\[79\]](#)[\[82\]](#) (Sem: 3-8)

Select 6 credits of 400-level courses in computer sciences, life sciences, mathematical sciences, or physical sciences[\[79\]](#) (Sem: 5-8)

Select 9-16 credits from Environmental Studies option program list with at least 6 credits with ECON, ECNS, PLSC, or POLSC designations and at least 5-7 credits at the 400 level (Students may apply 6 credits of basic ROTC.) (Sem: 1-8)

Select 2-4 credits of 400-level research, internship, field school, or studies abroad[\[80\]](#) (Sem: 5-8)

EARTH AND SPACE SCIENCE PRE-CERTIFICATION OPTION: (43-46 credits)

(This option is designed to prepare students in pre-certification for teaching earth and space science.)

PRESCRIBED COURSES (15 credits)

ASTRO 10 GN(2), ASTRO 11 GN(1), GEOSC 2 GN(3), GEOSC 20 GN(3), GEOSC 40 GN(3), METEO 3 GN(3) (Sem: 1-4)

ADDITIONAL COURSES (6 credits)

Select 6 credits from ASTRO 291 GN(3), ASTRO 292 GN(3), GEOG 10 GN(3), or GEOSC 10 GN(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (22-25 credits)

Select 6 credits from the geosciences[\[79\]](#)[\[82\]](#) (Sem: 5-8)

Select at least 6 credits at the 400 level in one of the following areas: computer sciences, life sciences, mathematical sciences, or physical sciences[\[79\]](#) (Sem: 5-8)

Select 10-13 credits, with at least 6-9 credits at the 400 level, from the program list (Students may apply 6 credits of basic ROTC.)[\[80\]](#) (Sem: 1-8)

GENERAL SCIENCE PRE-CERTIFICATION OPTION: (43-46 credits)

(This option is designed to prepare students in pre-certification for teaching general science.)

PRESCRIBED COURSES (19 credits)

ASTRO 10 GN(2), ASTRO 11 GN(1), BIOL 230W GN(4), GEOSC 2 GN(3), GEOSC 20 GN(3), GEOSC 40 GN(3), METEO 3 GN(3) (Sem: 1-4)

ADDITIONAL COURSES (7-8 credits)

Select 3-4 credits from CMPSC 122 GQ(3), MATH 230(4), MATH 250(3), or STAT 200 GQ(4) (Sem: 3-6)

Select 4 credits from BIOL 220W GN(4) or BIOL 240W GN(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (16-20 credits)

Select at least 6 credits at the 400 level in one of the following areas: computer sciences, life sciences, mathematical sciences, or physical sciences^[79] (Sem: 5-8)

Select 10-14 credits, with 6-9 credits at the 400 level, from the program list (Students may apply 6 credits of basic ROTC.)^[80] (Sem: 1-8)

^[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

^[79] Computer sciences include CENBD and CMPSC; geosciences include GEOG, GEOSC, MATSC, MATSE; life sciences include BIOL, BMB, MICRB; mathematical sciences include MATH and STAT; physical sciences include ASTRO, CHEM, PHYS.

^[80] A student in this major must complete at least 15 credits of 400-level courses and 3 credits of W courses in prescribed, additional, or supporting courses from one of the areas: computer science, life sciences, mathematical sciences, or physical sciences.

^[81] A maximum of 8 credits of Research (494), Internship (495), or Independent Study (296, 496) may be applied toward credits for graduation in all options.

^[82] In addition to courses used to satisfy the prescribed courses requirement.

Last Revised by the Department: Summer Session 2003

Blue Sheet Item #: 31-04-013

Review Date: 1/14/03

UCA Revision #1: 8/14/06

UCA Revision #2: 7/30/07

BD

Structural Design and Construction Engineering Technology

Capital College (SDCET)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR SEROJ MACKERTICH, *Program Chair, School of Science, Engineering, and Technology*

The program in Structural Design and Construction Engineering Technology provides the basic education required for the structural engineer and construction profession. Students learn the basic general engineering concepts needed for this major with emphasis on the fundamentals, structural design principles, and construction techniques through required course work. They are given the opportunity to focus in a discipline of construction management or structural design through a selected option or choose a broad general option. Courses in communication skills, arts, humanities, social and behavioral sciences, and other engineering related areas broaden the program. Students gain experience in working as members of a team and in using interdisciplinary approaches to solve problems. These experiences, as well as those related to design and construction principles, are taught through exercises in the classroom, laboratory, and field. The program culminates with a capstone project course in which the students' knowledge and skills are applied to specific problems.

For the B.S. degree in Structural Design and Construction Engineering Technology, a minimum of 125 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(20-24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES, REQUIREMENTS FOR THE MAJOR or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 2-10 credits

REQUIREMENTS FOR THE MAJOR: 95-102 credits

(This includes 24 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 3 credits of GWS courses; 3 credits of GHA courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 76-80 credits

PRESCRIBED COURSES (45 credits)

CHEM 110 GN(3), CHEM 111 GN(1), ENGL 202C GWS(3), MATH 140 GQ(4) (Sem: 1-4)

ET 200(3) (Sem: 2-5)

CE 254 GHA;US(3)[\[1\]](#), SSET 295(1) (Sem: 3)

CET 342(3), CET 343(3) (Sem: 5-6)

CE 333(3)[\[1\]](#), CET 308(3), CET 430(3)[\[1\]](#), CET 431(3)[\[1\]](#), CET 432(3)[\[1\]](#), CET 434(3), CET 435(3)[\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (31-35 credits)

Select 2-3 credits from: EGT 101(1) and EGT 102(1) or EDSGN 100(3) (Sem: 1-2)

Select 3-4 credits from: PHYS 150 GN(3), PHYS 211 GN(4), PHYS 250 GN(4) (Sem: 1-3)

Select 3-4 credits from: PHYS 151 GN(3), PHYS 212 GN(4), PHYS 251 GN(4) (Sem: 2-4)

Select 3 credits from: ECON 14 GS(3), ECON 102 GS(3), ECON 104 GS(3) (Sem: 2-4)

Select 4 credits from: MATH 141 GQ(4), STAT 200 GQ(4) (Sem: 2-6)

Select 3 credits from: EMCH 211(3)[\[1\]](#), ET 300(3), MCHT 111(3)[\[1\]](#) (Sem: 2-6)

Select 3 credits from: EMCH 213(3)[\[1\]](#), ET 322(3)[\[1\]](#), MCHT 213(3)[\[1\]](#) (Sem: 2-6)

Select 1 credit from: ET 323(1), MCHT 214(1) (Sem: 2-6)

Select 3 credits from: CE 310(3), SUR 111(3) (Sem: 2-7)

Select 3 credits from: CMPSC 101 GQ(3), CMPSC 121 GQ(3), CMPSC 201 GQ(3), CMPSC 202 GQ(3) (Sem: 3-4)

Select 3-4 credits from: ACCTG 211(4), MGMT 100(3) or MGMT 301(3) (Sem: 3-8)

REQUIREMENTS FOR THE OPTION: 19-22 credits

CONSTRUCTION MANAGEMENT OPTION: (19-21 credits)

PRESCRIBED COURSES (10 credits)[\[1\]](#)

CE 456(3), CE 458(3), CE 488C(4) (Sem: 7-8)

ADDITIONAL COURSES (6-7 credits)

Select 3-4 credits from ACCTG 211(4) or MGMT 100(3), MGMT 301(3) (Sem: 2-8)

Select 3 credits from AE 310(3) or CE 321(3) or ENVE 430(3) or MET 435(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (3-4 credits)

Select 3-4 credits from approved program list (Sem: 7-8)

STRUCTURAL DESIGN OPTION: (19-20 credits)

PRESCRIBED COURSES (13 credits)

CE 445(3)[\[1\]](#), CE 449(3)[\[1\]](#), CE 488D(4)[\[1\]](#), EMCH 212(3) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)

Select 3 credits from CET 361(3) or CE 360(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (3-4 credits)

Select 3-4 credits from approved program list (Sem: 7-8)

GENERAL OPTION: (22 credits)

PRESCRIBED COURSES (12 credits)[\[1\]](#)

CE 445(3), CE 449(3), CE 456(3), CE 458(3) (Sem: 7-8)

ADDITIONAL COURSES (10 credits)

Select 3 credits from AE 310(3) or MET 435(3) (Sem: 7-8)

Select 3 credits from CE 360(3) or CET 361(3) (Sem: 7-8)

Select 4 credits from CE 488C(4)[\[1\]](#) or CE 488D(4)[\[1\]](#) (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-03-035

Review Date: 11/13/2012

UCA Revision #1: 8/14/06

UCA Revision #2: 7/30/07

CL

Software Engineering

Penn State Erie, The Behrend College (SE BD)

This major provides students with a strong foundation in software engineering through combination of classroom study, software development experience, and design projects. Design, analysis, verification, and maintenance of software systems are stressed. Built upon a core of science and mathematics courses, this major has the objective of educating graduates to be problem solvers. Students acquire the ability to work as members of a team toward successful attainment of a common goal, preparing them for work in industry or further study in graduate school. In addition, written and oral communication skills are developed from an early stage, culminating in a senior design project that stresses communication as well as engineering content.

In addition to completing a broad-based science core in mathematics, chemistry, and physics, students pursue their interest in software engineering by studying principles in computer programming, object-oriented design, software design, software verification, information systems, operating systems, and data communications. The program has a capstone software design project that requires students to work together on teams to design, plan, manage, and implement a software design project.

Entrance Requirement: In addition to the Carnegie unit and minimum GPA requirements described by University policies, all students applying for entrance to any of the engineering majors at The Behrend College must have at least a 2.0 cumulative GPA by the end of the semester prior to applying for entrance to the major and have completed, with a minimum grade of C: CHEM 110 GN(3), MATH 140 GQ(4), MATH 141 GQ(4), and PHYS 211 GN(4). These courses must be completed by the end of the semester during which the admission to major process is carried out.

For the B.S. degree in Software Engineering, a minimum of 126 credits is required. A student enrolled in this major must earn a grade of C or better in each 300- and 400-level course in the major.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of the 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 1 credit

REQUIREMENTS FOR THE MAJOR: 101-102 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GWS courses; 3 credits of GS courses.)

PRESCRIBED COURSES (86 credits)

CHEM 110 GN(3)[1], CHEM 111 GN(1), CMPSC 121 GQ(3), CMPSC 122(3)[1] (Sem: 1-2)

MATH 140 GQ(4)[1], MATH 141 GQ(4)[1], MATH 220 GQ(2-3), MATH 250(3), PHYS 211 GN(4)[1], PHYS 212 GN(4) (Sem: 1-4)

CMPEN 271(3)[1], CMPEN 275(1), CMPSC 360(3)[1], ENGL 202C GWS(3), MIS 336(3)[1], SWENG 311(3)[1] (Sem: (3-4)

CMPEN 441(3)[1], CMPSC 461(3)[1], CMPSC 465(3)[1], STAT 301 GQ(3)[1], SWENG 452(3)[1], SWENG 411(3)[1], SWENG 421(3)[1], SWENG 431(3)[1] Sem: (5-6)

CMPEN 351(3)[1], CMPEN 461(3)[1], SWENG 480(3)[1], SWENG 481(3)[1], MGMT 301(3)[1] (Sem: (7-8)

ADDITIONAL COURSES (6-7 credits)

ECON 102 GS(3) or ECON 104 GS(3) (Sem: 3-4)

EE 210(4) or EE 211(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits of technical elective courses from school-approved list. (Sem: 6-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2008

Blue Sheet Item #: 36-04-012

Review Date: 6/9/08

UCA Revision #1: 8/14/06

UCA Revision #2: 7/30/07

BD

Secondary Education

Abington College (SECAB)
Penn State Erie, The Behrend College (SECBC)
University Park, College of Education (SECED)

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

PROFESSOR SCOTT METZGER, *Director*

The following teaching options are available for majors in Secondary Education: Biological Science, Chemistry, Earth and Space Science, English/Communication, Environmental Education, General Science, Mathematics, Physics, and Social Studies/Citizenship Education.

The Secondary Education major helps prepare students for middle school and/or high school teaching positions and for other employment in fields related to their content specialties.

BIOLOGICAL SCIENCE TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for the Instructional I certificate for teaching at the secondary-school level, which is issued by the Pennsylvania Department of Education.

CHEMISTRY TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for the Instructional I certificate for teaching at the secondary-school level, which is issued by the Pennsylvania Department of Education.

EARTH AND SPACE SCIENCE TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for the Instructional I certificate for teaching at the secondary-school level, which is issued by the Pennsylvania Department of Education.

ENGLISH/COMMUNICATION TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for the Instructional I certificate for teaching at the secondary-school level, which is issued by the Pennsylvania Department of Education. This program has a Language and Literature Core and a Media Literacies Core. This program is open to students outside the College of Education who desire certification.

ENVIRONMENTAL EDUCATION TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for a Pennsylvania teacher certification in Environmental Education when completed in conjunction with another secondary education teaching option (i.e., Biological Science Teaching option). The total number of credits required will depend primarily on that other option.

GENERAL SCIENCE TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for the Instructional I certificate for teaching General Science at the secondary-school level, which is issued by the Pennsylvania Department of Education. This option may only be completed in conjunction with another secondary education option (e.g., Biology); the total number of credits required will depend primarily on that other option.

MATHEMATICS TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for the Instructional I certificate for teaching at the secondary-school level, which is issued by the Pennsylvania Department of Education.

PHYSICS TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for the Instructional I certificate for teaching at the secondary-school level, which is issued by the Pennsylvania Department of Education.

SOCIAL STUDIES TEACHING OPTION: This option enables the graduate to meet all of the academic requirements for the Instructional I certificate for teaching social studies courses in the secondary-school level, which is issued by the Pennsylvania Department of Education. This option has a prescribed component required for all candidates as well as a choice of concentrations that focus on a specific area. All graduates who successfully complete this program are highly qualified to teach history in secondary grades (7-12) and are eligible for PA certification in Social Studies (7-12) and/or Citizenship Education (7-12). Candidates who successfully complete the Civics & Government concentration are highly qualified to be teachers of U.S. government and civics (7-12). Candidates who successfully complete the Economics concentration are highly qualified to be teachers of economics and economic issues (7-12). Candidates who successfully complete the Geography concentration are highly qualified to be teachers of geography and global studies (7-12). Candidates who successfully complete the Social Sciences concentration receive additional content preparation to be highly qualified teachers of anthropology, psychology, or sociology (7-12). Candidates who successfully complete the Citizenship Education concentration receive additional in-depth content preparation in selected social-studies subjects (7-12).

Baccalaureate degree candidates must meet the following requirements 1-3 by the end of their third semester:

1. A minimum cumulative grade point average of 3.00
2. Qualifying scores from the PECT PAPA for Reading, Writing and Mathematics
3. Documentation of at least 40 hours of volunteer or paid education work experience with learners of the age group the candidate plans to teach, with younger learners in the candidate's intended content area, or with adults with special needs. Part of this experience should include working with some learners who come from backgrounds that are different from the candidate's.

Requirements 4-9 must be met by the end of the fourth semester when students typically participate in the Entrance to Major process.

4. A grade of "C" or better in all specified courses.
5. Completion of an early field experience specified by the certification program.
6. Completion of a core of Education courses specified by the certification program.
7. Completion of additional credits as specified by the certification program.
8. Completion of at least 48 semester credit hours, including ENGL 15 GWS(3) or ENGL 30 GWS(3), three credits of literature, and six credits of quantification
9. Approval from the professional education adviser or the head of the pertinent certification program.

For the B.S. degree in Secondary Education with an option in *Biological Science Teaching*, a minimum of 129 credits is required; with an option in *Chemistry Teaching*, a minimum of 126 credits is required; with an option in *Earth and Space Science Teaching*, a minimum of 123 credits is required; with an option in *English/Communication Teaching*, a minimum of 126 credits is required; with an option in *Environmental Education Teaching* and a cohort option, a minimum of 123 credits is required; with an option in *General Science Teaching* and a cohort option, a minimum of 121 credits is required; with an option in *Mathematics Teaching*, a minimum of 132 credits is required; with an option in *Physics Teaching*, a minimum of 121 credits is required; with an option in *Social Studies Teaching*, a minimum of 129 credits is required. (See also [Teacher Education Programs](#).)

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(12-24 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-4 credits

REQUIREMENTS FOR THE MAJOR: 83-105 credits
(This includes 12-27 credits of General Education courses: Biological Science Teaching option, Chemistry Teaching option, Earth and Space Science Teaching option, Environmental Education Teaching option, General Science Teaching option, and Physics Teaching option--6 credits of GH courses; 9 credits of GN courses; 3-6 credits of GS courses; 6 credits of GQ courses. English/Communication Teaching option--3-6 credits of GA courses; 6 credits of GH courses; 3-6 credits of GS courses. Mathematics Teaching option--6 credits of GH courses; 3-6 credits of GS courses; 6 credits of GQ courses. Social Studies Teaching option--6 credits of GH courses; 3 credits of GN courses; 6 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 45 credits[\[18\]](#)**PRESCRIBED COURSES** (36 credits)

CI 295(2), EDPSY 14(3), PSYCH 100 GS(3) (Sem: 1-2)
 CI 280 GH(3) (Sem: 1-6)
 CI 495C(3), SPLED 400(4), SPLED 403B(3) (Sem: 5-8)
 CI 495E(15) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)

PSYCH 412(3) or HDFS 239 GS(3) (Sem: 4-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 3 credits of GH courses from Literature Selection (Sem: 1-4)
 Select 3 credits EDTHP 115 US(3) or EDTHP 115A GS;US(3) (Sem: 1-2) or 3 credits at the 400 level of any EDTHP course (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 38-66 credits**BIOLOGICAL SCIENCE TEACHING OPTION** (63-66 credits)[\[18\]](#)**OPTION CURRENTLY ON HOLD at Penn State Abington;****NOT ACCEPTING NEW STUDENTS**

Begin Date of Enrollment Hold: May 30, 2012

The program will continue to be delivered at University Park and Penn State Erie.

PRESCRIBED COURSES (30 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4) (Sem: 1-2)
 BIOL 110 GN(4), BIOL 220W GN(4), BIOL 240W GN(4) (Sem: 1-4)
 SCIED 411(3), SCIED 412(3) (Sem: 5-7)

ADDITIONAL COURSES (25-28 credits)

MATH 141 GQ(4) or 4 credits of 200-level STAT GQ courses; BIOL 230W GN(4) or BMB 251(3) and BMB 252(3); BIOL 427(3), GEOSC 204(4), GEOSC 424(3), ANTH 21 GN(3) or ANTH 460(3); PHYS 250 GN(4) and PHYS 251 GN(4) or PHYS 211 GN(4) and PHYS 212 GN(4) (Sem: 4-7)
 Select 6 credits from BMB 211(3), BMB 212(1), BMB 401(3), BMB 402(3), CHEM 202(3), CHEM 203(3), CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 4-7)

SUPPORTING COURSES AND RELATED AREAS (8 credits)

Select 8 credits of 300-level or 400-level BIOL or biological fields (Sem: 5-7)

Note 1: Students may complete multiple science teaching options concurrently by completing all of each option's requirements. The six science teaching options are: Biology, Chemistry, Earth and Space Science, Environmental Education, General Science, and Physics.

Note 2: Red Cross certification in First Aid and CPR (or their equivalent) must be earned for science certification.

CHEMISTRY TEACHING OPTION: (60-62 credits)[\[18\]](#)**PRESCRIBED COURSES** (42 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4) (Sem: 1-2)
 BIOL 110 GN(4), MATH 141 GQ(4), PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 1-4)
 CHEM 450(3), CHEM 452(3), CHEM 457(1-2), SCIED 411(3), SCIED 412(3) (Sem: 5-7)

ADDITIONAL COURSES (12-14 credits)

CHEM 202(3) and CHEM 203(3) or CHEM 210(3), CHEM 212(3), and CHEM 213(2) (Sem: 3-4)
 Select 6 credits from CHEM 402(3), CHEM 406(3), CHEM 408(3), CHEM 410(3), CHEM 412(3), CHEM 423W(4), CHEM 425W(4) (Sem: 5-7)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in CHEM or chemistry-related fields at the 200 level or higher (e.g., BMB 211 and BMB 212, BMB 251, BMB 252, MICRB 251, FDSC 400, ANSC 301, NUTR 251, CHEM, CHE) (Sem: 5-7)

Note 1: Students may complete multiple science teaching options concurrently by completing all of each option's requirements. The six science teaching options are: Biology, Chemistry, Earth and Space Science, Environmental Education, General Science, and Physics.

Note 2: Red Cross certification in First Aid and CPR (or their equivalent) must be earned for science certification.

EARTH AND SPACE SCIENCE TEACHING OPTION: (57-62 credits)[\[18\]](#)**PRESCRIBED COURSES** (22 credits)

MATH 140 GQ(4), BIOL 110 GN(4), CHEM 110 GN(3), CHEM 112 GN(3), CHEM 111 GN(1), CHEM 113 GN(1) (Sem: 1-2)
 SCIED 411(3), SCIED 412(3) (Sem: 5-7)

ADDITIONAL COURSES (27-33 credits)

GEOSC 1(3), GEOSC 20 GN(3) or GEOSC 71(3) (Sem: 1-3)
 MATH 141 GQ(4) or 4 credits of 200-level STAT GQ courses (Sem: 1-4)
 PHYS 250 GN(4) and PHYS 251 GN(4), or PHYS 211 GN(4) and PHYS 212 GN(4), or PHYS 211 GN(4) and PHYS 213 GN(2) (Sem: 1-4)
 GEOSC 21 GN(3) or GEOSC 204(4); EARTH 100 GN(3), EARTH 101 GN;US(3), EARTH 103 GN(3) or EARTH 105 GN;IL(3); METEO 3 GN(3), METEO 201(3), or METEO 300(4); ASTRO 10 GN(2) and ASTRO 11 GN(1), or ASTRO 291 GN(3) (Sem: 1-5)
 GEOSC 40 GN(3), GEOSC 440(3) or METEO 22(2); or BIOL 435(3) or BIOL 482(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (8 credits)

Select 8 credits from EARTH, GEOSC, METEO, ASTRO, other earth science field, or BIOL 427(3) (Sem: 5-7)

Note 1: Students may complete multiple science teaching options concurrently by completing all of each option's requirements. The six science teaching options are: Biology, Chemistry, Earth and Space Science, Environmental Education, General Science, and Physics.

Note 2: Red Cross certification in First Aid and CPR (or their equivalent) must be earned for science certification.

ENGLISH/COMMUNICATION TEACHING OPTION: (54 credits)[\[18\]](#) Note: Must complete at least 3 credits of IL and 3 credits of US Cultures selections.**LANGUAGE AND LITERATURE CORE: (36 credits)****PRESCRIBED COURSES** (12 credits)

ENGL 444(3) (Sem: 5-6)
 LLED 411(3), LLED 412(3), LLED 420(3) (Sem: 5-8)

ADDITIONAL COURSES (24 credits)

Select 3 credits from each cluster (a-h) below:

(a) 200-level British or U.S. Literature Survey (Sem: 3-6)

ENGL 221 GH(3), ENGL 221W(3), ENGL 222 GH(3), ENGL 222W(3), ENGL 231 GH(3), ENGL 231W, ENGL 232 GH(3), ENGL 232W(3)

(b) Elements of Literature (Sem: 3-6)

ENGL 201(3), ENGL 261(3), ENGL 262 GH(3), ENGL 263 GH(3), ENGL 265 GH(3), ENGL 268 GH(3), ENGL 401(3), ENGL 401W(3), COMM 261(3)

(c) 400-level Comparative Literature/Literature of Diverse Cultures (Sem: 5-8)

AMST 493(3), CMLIT 400 US;IL(3), CMLIT 401 IL(3), CMLIT 403 US(3), CMLIT 404 IL(3), CMLIT 405 US;IL(3), CMLIT 406 IL(3), CMLIT 408 IL(3), CMLIT 422 IL(3), CMLIT 423 IL(3), CMLIT 453 IL(3), CMLIT 470 IL(3), CMLIT 480 IL(3), CMLIT 486 IL(3), CMLIT 487 IL(3), CMLIT 488 IL(3), ENGL 404(3), ENGL 426 US(3), ENGL 43 US(3), ENGL 461 US(3), ENGL 462 US(3), ENGL 463 US(3), ENGL 466 US(3), ENGL 467 US(3), ENGL 468 US(3), ENGL 469 US(3), ENGL 490 US;IL(3); ENGL 401(3), ENGL 402(3), ENGL 404(3) when topic appropriate (with adviser's approval)

(d) 400-level Topics in American Literature (sem: 5-8)

ENGL 430(3), ENGL 432(3), ENGL 433(3), ENGL 434(3), ENGL 435(3), ENGL 436(3), ENGL 437(3), ENGL 438(3), or ENGL 439(3), ENGL 492(3); ENGL 401(3), ENGL 402(3), ENGL 404(3) when topic appropriate (with adviser's approval)

(e) Topics in British Literature (Sem: 5-8)

ENGL 440(3), ENGL 441(3), ENGL 442(3), ENGL 443(3), ENGL 445(3), ENGL 446(3), ENGL 447(3), ENGL 448(3), ENGL 450(3), ENGL 452(3), ENGL 453(3), ENGL 454(3), ENGL 455(3), ENGL 456(3), ENGL 457(3), ENGL 458(3), ENGL 489(3); ENGL 401(3), ENGL 402(3), ENGL 404(3) when topic appropriate (with adviser's approval)

(f) Grammar, Language, and Linguistics (Sem: 5-6)

ENGL 100(3), ENGL 407(3), ENGL 417(3), or LING 100 GS(3)

(g) Creative Writing and/or Advanced Composition (Sem: 5-6)

CAS 214(3), COMM 260W(3), COMM 460(3), COMM 461(3), COMM 462(3), COMM 467(3), ENGL 212(3), ENGL 213(3), ENGL 215(3), ENGL 281(3), ENGL 412(3), ENGL 413(3), ENGL 414(3), ENGL 416(3), ENGL 418(3), ENGL 419(3), ENGL 420(3), ENGL 421(3), THEA 440(3)

(h) Rhetoric (Sem: 7-8)

CAS 215(3), CAS 415(3), CAS 475(3), COMM 467(3), ENGL 409(3), ENGL 411(3), ENGL 470(3), ENGL 471(3), ENGL 472(3), ENGL 473(3), ENGL 474(3), ENGL 487(3)

MEDIA LITERACIES CORE: (18 credits)

PRESCRIBED COURSES (3 credits)

LLED 480(3) (Sem: 5-6)

ADDITIONAL COURSES (15 credits)

(a) Mass Media. Select 3 credits from:

COMM 100 GS(3), COMM 118 GS(3), COMM 150 GA(3), COMM 205 GS;US(3), COMM 411(3), COMM 413W(3) (Sem: 1-4)

(b) Speech and Oral Performance. Select 3 credits from:

CAS 213(3), CAS 215(3), CAS 250(3), CAS 271 US;IL(3), CAS 280W(3) or CAS 375(3), CAS 422 US(3), THEA 102 GA(3) (Sem: 4-8)

(c) Media Literacy. Select 9 credits within one, or across several, of the following media literacy areas:

Multimedia

ART 100 GA(3), ARTH 111 GA;IL(3), ARTH 112 GA;IL(3), ARTH 120 GA;IL(3), ARTH 130 GA;US;IL(3), CAS 175 GH(3), CAS 283(3), CAS 415(3), CAS 483(3), COMM 100 GS(3), COMM 118(3), COMM 120(3), COMM 150 GA(3), COMM 180 GS(3), COMM 205 US(3), COMM 242(3), COMM 250 GA(3), COMM 283(3), COMM 453 IL(3), COMM 454(3), CMLIT 453(3), PHOTO 100 GA(3), WMNST 205 GS;US(3) (Sem: 1-8)

Theatre

THEA 102 GA(3), THEA 103(3), THEA 104(3), THEA 112(3), THEA 120(3), THEA 130(3), THEA 131(3), THEA 189(3), THEA 210(3), THEA 428(2) (Sem: 1-8)

Journalism

COMM 260W(3), COMM 261 GH(3), COMM 269(3), COMM 409(3), COMM 460(3), COMM 461(3), COMM 462(3), COMM 467(3), COMM 497 when topic appropriate (with adviser's approval) (Sem: 3-8)

Communication Arts and Sciences

CAS 301 GH(3), CAS 303 GS(3), CAS 203 GS(3), CAS 213(3), CAS 215(3), CAS 250(3), CAS 280W(3), CAS 311(3), CAS 375(3), CAS 383(3), CAS 411(3), CAS 422 US(3), CAS 455 US(3), CAS 470(3), CAS 471 US;IL(3), CAS 475(3) (Sem: 3-8)

Creative Writing

ENGL 210(3), ENGL 212(3), ENGL 213(3), ENGL 215(3), ENGL 281(3), ENGL 412(3), ENGL 413(3), ENGL 422(3), ENGL 423(3), ENGL 425(3) Sem: (3-8)

Instructional Systems:

EDTEC 400(3), EDTEC 448(3), LDT 566(3), LDT 441(3) (Sem: 3-8)

Bilingual Education and World Languages:

APLNG 482 IL(3), APLNG 491(3), APLNG 493 IL(3), CAS 271 US;IL(3), CAS 471 US;IL(3), LLED 445(3), WLED 411(3), WLED 412(3) or a foreign language credits at the 12th credit level or above (Sem: 3-8)

ENVIRONMENTAL EDUCATION TEACHING OPTION: (55-58 credits) [\[18\]](#)

PRESCRIBED COURSES (24 credits)

CHEM 101 GN(3), MATH 140 GQ(4) (Sem: 1-3)

BIOL 110 GN(4), BIOL 220W GN(4) (Sem: 1-4)

SCIED 411(3), SCIED 412(3), SCIED 457(3) (Sem: 5-7)

ADDITIONAL COURSES (7-8 credits)

CHEM 20(3) and CHEM 21(1); or CHEM 110 GN(3) and CHEM 111 GN(1) (Sem: 1-3)

BIOL 240W GN(4), WFS 407(3) or WFS 408(3) (Sem: 3-5)

SUPPORTING COURSES AND RELATED AREAS (24-26 credits)

Select two courses (6-8 credits) in environmental law, economics, management and policy (e.g., ECON 428; ERM 411, ERM 412, ERM 413; WFS 410, WFS 447, WFS 463) (Sem: 4-7)

Select 4 credits of an environmentally related course in Science Technology and Society (e.g., STS 47, STS 135 GS, STS 420, STS 460) (Sem: 5-7)

Select at least 14 credits from the cohort Teaching option (see Note 1)

Note 1: This option may only be completed in conjunction with another secondary teaching option, such as the Biological Science Teaching option.

Note 2: Students may complete multiple science teaching options concurrently by completing all of each option's requirements. The six science teaching options are: Biology, Chemistry, Earth and Space Science, Environmental Education, General Science, and Physics.

Note 3: Red Cross certification in First Aid and CPR (or their equivalent) must be earned for science certification.

GENERAL SCIENCE TEACHING OPTION: (38 credits) [\[18\]](#)

PRESCRIBED COURSES (22 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4) (Sem: 1-3)

BIOL 110 GN(4) (Sem: 1-4)

SCIED 411(3), SCIED 412(3) (Sem: 5-7)

ADDITIONAL COURSES (16 credits)

BIOL 220W GN(4), BIOL 230W GN(4), or BIOL 240W GN(4) (Sem: 3-5)

MATH 141 GQ(4) or 4 credits of 200-level STAT GQ courses (Sem: 3-5)

PHYS 250 GN(4) and PHYS 251 GN(4) or PHYS 211 GN(4) and PHYS 212 GN(4) (Sem: 3-5)

Note 1: This option may only be completed in conjunction with another secondary teaching option, such as Biology.

Note 2: Students may complete multiple science teaching options concurrently by completing all of each option's requirements. The six science teaching options are: Biology, Chemistry, Earth and Space Science, Environmental Education, General Science, and Physics.

Note 3: Red Cross certification in First Aid and CPR (or their equivalent) must be earned for science certification.

MATHEMATICS TEACHING OPTION: (57-59 credits) [\[18\]](#)

PRESCRIBED COURSES (35-37 credits)

MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-2)

MATH 220 GQ(2-3), MATH 311W(3-4) (Sem: 3-6)

MATH 310(3), MATH 312(3), MATH 414(3), MATH 471(4), MTHED 411(3), MTHED 412(3), MTHED 427(3) (Sem: 5-8)

ADDITIONAL COURSES (16 credits)

CMPSC 101 GQ(3) or CMPSC 121 GQ(3); MATH 230(4) or MATH 231(2) and MATH 232(2); STAT 401(3) or MATH 415(3) or 3 credits of MTHED from program list; MATH 435(3) or MATH 470(3); MATH 436(3) or MATH 441(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from 400-level MATH or MTHED courses (Sem: 5-8)

PHYSICS TEACHING OPTION: (55-62 credits) [\[18\]](#)

PRESCRIBED COURSES (45-46 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-3)

PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 3-4)

MATH 220 GQ(2-3), PHYS 213 GN(2), PHYS 214 GN(2) (Sem: 3-6)

PHYS 237(3), PHYS 400(3), PHYS 419(3), SCIED 411(3), SCIED 412(3) (Sem: 5-7)

ADDITIONAL COURSES (6-12 credits)

PHYS 457(1-3), or PHYS 402(4) or PHYS 458(4); MATH 230(4) or MATH 231(2); MATH 250(3) or MATH 251(4) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (4 credits)

Introductory biological sciences survey courses [e.g., BIOL 110 GN(4)] (Sem: 3-6)

Note 1: Students may complete multiple science teaching options concurrently by completing all of each option's requirements. The six science teaching options are: Biology, Chemistry, Earth and Space Science, Environmental Education, General Science, and Physics.

Note 2: Red Cross certification in First Aid and CPR (or their equivalent) must be earned for science certification.

SOCIAL STUDIES TEACHING OPTION: (57 credits) [\[18\]](#)

PRESCRIBED COURSES (24 credits)

ECON 104 GS(3), GEOG 10 GN(3), GEOG 20 GS(3), HIST 20 GH;US(3), HIST 21 GH;US(3), PLSC 1 GS(3) (Sem: 1-6)

SSED 411(3), SSED 412W(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 3 credits from HIST 1 GH;IL(3) or HIST 10 GH;IL(3) (Sem: 1-6)

Select 3 credits from HIST 2 GH;IL(3) or HIST 11 GH;IL(3) (Sem: 1-6)

Select 6 credits from ANTH 45 GS;US;IL(3); ECON 102 GS(3); GEOG 30N GS;IL(3), GEOG 40 GS;IL(3), GEOG 160 GS(3) LDT 433(3), PLSC 3 GS;IL(3), PLSC 14 GS;IL(3), SOC 1 GS(3), SSED 200 US(3) (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 6 credits of 400-level History (Sem: 5-8)

Select one concentration (15 credits) below:

Citizenship Education

Select 6 credits from: ANTH 45 GS;US;IL(3), ECON 102 GS(3), ECON 302 GS(3), ECON 304 GS(3), ECON 315 GS(3), ECON 323 GS(3), ECON 333 GS(3), ECON 342 GS(3), PLSC 3 GS;IL(3), PLSC 7 GS(3), PLSC 14 GS;IL(3), PLSC 110 GS;US(3), PLSC 123 GS;US;IL(3), PLSC 125(3), or PLSC 130 GS;US(3), SOC 1 GS(3) (Sem: 1-8)

Select 3 credits from: GEOG 30N GS;IL(3), GEOG 40 GS;IL(3), GEOG 320 GS;US;IL(3), GEOG 122 GH;US(3), GEOG 123 GS;IL(3), GEOG 124 GS;IL(3), GEOG 126 GS;US;IL(3), GEOG 128 GS;IL(3), GEOG 130 GS(3), or GEOG 160 GS(3) (Sem: 1-8)

Select 3 credits of History at the 100-level or above (Sem: 1-8)

SSED 200 US(3) (Sem: 1-8)

Civics and Government

PLSC 3 GS;IL(3) (Sem: 1-8)

PLSC 14 GS;IL(3) (Sem: 1-8)

Select 3 credits from: PLSC 7 GS(3), PLSC 110 GS;US(3), PLSC 123 GS;US;IL(3), PLSC 125(3), or PLSC 130 GS;US(3) (Sem: 1-8)

Select 6 credits of 400-level Political Science (Sem: 5-8)

Economics

ECON 102 GS(3) (Sem: 1-8)

ECON 302 GS(3) (Sem: 1-8)

ECON 304 GS(3) (Sem: 1-8)

Select 6 credits of 400-level Economics (Sem: 5-8)

Geography

Select 9 credits of Geography below the 100 level (Sem: 1-8)

Select 6 credits of 400-level Geography (Sem: 5-8)

Social Sciences

Select 9 credits of Anthropology, Psychology, and/or Sociology below the 400 level (Sem: 1-8)

Select 6 credits of 400-level Anthropology, Psychology, and/or Sociology (Sem: 5-8)

Note 1: Courses taken to meet Additional Courses and other Supporting Courses and Related Areas requirements cannot also be applied to the concentration. Different courses need to be selected for the concentration and Additional Courses and other Supporting Courses and Related Areas requirements.

[18] A grade of C or better per course is required for teacher certification.

Penn State Erie/Mathematics Option Only (3/7/07)

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-035

Review Date: 04/5/2016

R & T: 01/14/2014

UCA Revision #1: 9/1/06

UCA Revision #2: 7/30/07

ED

Director updated: 2/13/12

Secondary Education Social Studies

Capital College (SESST)

PROFESSOR KAMINI GRAHAME, *Program Coordinator, School of Behavioral Sciences and Education*

The Secondary Education Social Studies major prepares students to meet the requirements as established by the Pennsylvania Department of Education, to be certified for the Social Studies Instructional I Certificate. The major prepares students to teach history, government, economics, geography, psychology, sociology, and anthropology.

Students are challenged to prepare for teaching assignments at the middle and high school level, and in diverse settings characterized as rural, urban, and suburban. The art and science of teaching in secondary schools is undergoing significant transformation as new technologies, time allocation for instruction, and new instructional strategies are impacting the delivery of social studies instruction.

Students admitted to the program must have the appropriate clearances. These include FBI fingerprint check, Act 151 child abuse history clearance, and Act 34 criminal record check.

Students thinking seriously about entering the education program should plan their freshman and sophomore years carefully. Semesters 5 through 8 are very structured.

Entry to Secondary Education Social Studies requires the following:

1. A minimum grade point average of 3.0.
2. Completion of ENGL 15 GWS(3) or ENGL 30 GWS(3) and three credits of literature from approved list with a C or higher grade.
3. Completion of six credits of college-level mathematics (MATH or STAT prefixes) with a C or higher grade.
4. Satisfaction of any entrance testing requirements set out by the Pennsylvania Department of Education in effect at the time of application for the major

Selective Retention:

Following entrance to the major, students will be evaluated for retention in the program based on:

1. maintaining a cumulative GPA of 3.0 or higher;
2. completion of required courses with a C or higher grade;
3. an acceptable or above rating on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

To be eligible to student teach, students must:

1. maintain a cumulative GPA of 3.0 or higher;
2. complete all required Content and Education Courses with a C or higher grade;
3. satisfaction of any entrance testing requirements set out by the Pennsylvania Department of Education in effect at the time of application for entrance to major;
4. be rated acceptable or above on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

In order to successfully complete the Secondary Education Social Studies Program, students must:

1. complete EDUC 490 with a grade of C or higher;
2. maintain a cumulative GPA of 3.0 or higher;
3. complete all required Content and Education Courses with a C or higher grade;
4. complete a presentation portfolio; and
5. be rated acceptable or above on the Penn State Harrisburg Professional Dispositions for Teacher Education.*

*FOR MORE DETAILED INFORMATION SEE THE SECONDARY EDUCATION HANDBOOK.

For a B.SOSC. degree in Secondary Education Social Studies, a minimum of 122 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES, GENERAL EDUCATION, or REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 3 credits

REQUIREMENTS FOR THE MAJOR: 95 credits

(This includes 21 credits of General Education courses: 6 credits of GH courses, 3 credits of GN courses, 6 credits of GS courses, 6 credits of GQ courses.)
(At least 15 credits must be at the 400 level.)

PRESCRIBED COURSES (65 credits) [1]

BISC 3 GN(3), CI 280 GH(3), EDPSY 14(3), HIST 20 GH;US(3), HIST 21 GH;US(3), PSYCH 100 GS(3), SOC 1 GS(3) (Sem: 1-4)
EDUC 313(2), EDUC 314(3), EDUC 315 US(3), EDUC 415(3), EDUC 458(3), EDUC 459(3), EDUC 490(12) (Sem: 5-8)
GEOG 40 GS;IL(3), GEOG 128 GS;IL(3), HDFS 239 GS(3), HIST 320(3), PLSC 1 GS(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 6 credits from the following:

MATH 17 GQ(3), MATH 18 GQ(3), MATH 21 GQ(3), MATH 22 GQ(3), MATH 26 GQ(3), MATH 30 GQ(3), MATH 35 GQ(3), MATH 36 GQ(3), MATH 40 GQ(5),
MATH 200 GQ(3) or MATH 220 GQ(2-3), STAT 100 GQ(3), STAT 200 GQ(4) (Sem: 1-4)
Select 3 credits from: ECON 104 GS(3) or ECON 14 GS(3) (Sem: 1-4)
Select 3 credits from: HIST 1 GH;IL(3) or HIST 10 GH;IL(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (18 credits)

(6 of these 18 credits must be at the 400-level. In addition, 3 of these must be US cultures)

Select 3 credits of literature courses from approved department list (Sem: 1-4)

Select 3 credits of African American studies, American studies, history or minority studies from approved department list (Sem: 5-8)

Select 3 credits of anthropology from approved department list (Sem: 5-8)

Select 3 credits of psychology from approved department list (Sem: 5-8)

Select 3 credits of political science (Sem: 5-8)

Select 3 credits of sociology (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-034A

Review Date: 04/09/2013

Program Coordinator updated: 7/3/15

R & T: 02/24/2015

UCA Revision #1: 9/1/06

UCA Revision #2: 7/30/07

[Comments](#)

CL

Sociology

University Park, College of the Liberal Arts (SOCBA)

PROFESSOR JOHN ICELAND, *Head*

The major provides graduates with a sociological perspective on human behavior informed by exposure to different substantive areas of the field; an understanding of the structure of American society, its internal diversity, and its international context; an understanding of basic principles of the scientific method, statistics, research design, computer use, logic and critical thinking, and how these apply to the study of human behavior; and experience in posing sociological questions and collecting and analyzing data to bear on those questions. Graduates have the background to seek employment in a variety of public and private sector jobs, to pursue graduate study in sociology or related areas, or to enter professional schools in social work, law, business, or health fields.

Students may choose either a Bachelor of Arts or a Bachelor of Science degree program. The B.A. degree in Sociology is a classic liberal arts degree. The B.S. degree is intended for students with a strong interest in quantitative skills. Students completing the B.S. degree have additional training in mathematics and other social science disciplines.

Opportunities to work as departmental teaching and research assistants are available. Students are encouraged to participate in study abroad and/or internship experiences while enrolled in either the B.A. or B.S. sociology majors.

Graduates of this program have found positions in social research, social service agencies, government and business research and planning offices, other business positions (especially sales and marketing), or have entered graduate school in sociology, social work, policy analysis or law school.

For the B.A. and B.S. degrees in Sociology, a minimum of 123 credits is required. Either degree may be combined with a minor such as Business/Liberal Arts, Human Development and Family Studies, or Information Systems and Statistical Analysis, among others.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 20 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 38 credits^[1]

(This includes 4 credits of General Education GQ courses.)

PRESCRIBED COURSES (23 credits)

SOC 1 GS(3), STAT 200 GQ(4), CAS 283(3) (Sem: 1-6)

SOC 207(3) (Sem: 3-6)

SOC 405(3), SOC 470(4) (Sem: 5-8)

SOC 400(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits in sociology, at least 9 credits at the 400 level (Sem: 1-8)

Last Revised by the Department: Summer Session 2010

Blue Sheet Item #: 38-04-042

Review Date: 01/12/2010

Dept head updated: 11/30/07

LA

Sociology

University Park, College of the Liberal Arts (SOCBS)

PROFESSOR JOHN ICELAND, *Head*

Students may choose either a Bachelor of Arts or a Bachelor of Science degree program. The B.A. degree program provides a basic orientation to the field as a whole, study of its development and principles, training in methodology and study in depth of a major area of the discipline. It provides knowledge that is useful in a career in varied work settings as well as providing the foundation needed for graduate study in sociology of related fields.

For the B.S. degree in Sociology, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

INTERCULTURAL AND INTERNATIONAL COMPETENCE:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 21-23 credits

REQUIREMENTS FOR THE MAJOR: 61-63 credits^[1]

(This includes 6 credits of General Education GQ courses.)

PRESCRIBED COURSES (13 credits)

SOC 1 GS(3), SOC 207(3) (Sem: 1-8)

SOC 405(3), STAT 480(1) (Sem: 5-8)

SOC 400(3) (Sem: 7-8)

ADDITIONAL COURSES (9-11 credits)

MATH 110 GQ(4), MATH 111 GQ(2); or MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-4)

CAS 283(3) or MATH 441(3) (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS (39 credits)

Select 18 credits in sociology, 15 credits of which must be in an area of specialization chosen in consultation with a faculty adviser (9 credits must be at the 400 level) (Sem: 1-8)

Select 18 credits in social sciences, 9 credits in each of two fields of the social sciences other than sociology (at least 9 credits must be at the 400 level) (Sem: 3-8)

Select 3 credits in statistics at the 300 level or above (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-06-104

Review Date: 04/12/2011

Dept head updated: 12/2/11

Sociology

Capital College (SOCIO)

PROFESSOR KENNETH B. CUNNINGHAM, *Program Coordinator*

Sociology is the scientific study of society in all of its complexity. It includes the study of social structure, social interaction and social change from the micro level of small groups and families; to the meso level of communities, organizations, and institutions; to the macro level of globalization, war, technology and culture. The world today is undergoing tremendous changes and facing great challenges, problems, and possibilities. Sociology attempts to understand our world and to improve it.

The sociology major at Penn State Harrisburg provides a unique orientation to social change at multiple levels, including families, communities, organizations, social movements, institutions, society, and the world system. The major addresses topics such as culture, race/ethnicity, gender, sexual orientation, social class, inequality, urban life, globalization, environmental change, and political conflict.

The sociology program at Penn State Harrisburg prepares students to succeed in an increasingly complex, diverse, and globalized world. A major in sociology provides opportunities for a wide range of career options. Students with degrees in sociology work in social services, community, advocacy and non-profit organizations, education, business, law, criminal justice, policy-making, social science research, and public administration. An undergraduate degree in sociology also provides a strong foundation for graduate study in sociology and fields such as law, social work, human resources, criminal justice, community psychology, urban planning, political science, and related areas.

Two options are available within the major: (1) the General Sociology Option and (2) the Community Organization and Social Services Option.

GENERAL SOCIOLOGY OPTION: This option provides students with strong education in general sociology in a diverse range of sociological topics. The General Sociology Option is designed for students who seek a solid sociological education with preparation for the widest range of careers and employment opportunities, as well as for graduate education.

COMMUNITY ORGANIZATION AND SOCIAL SERVICES OPTION: This option provides students with strong preparation for careers working in community settings or in social services. The Community Organization and Social Services Option is designed for students who wish to work directly with people in a broad range of possible settings, in both public and private sectors.

Entry to Major Requirements:

Entry to the Sociology major requires 2.00 or higher cumulative grade-point average.

For a B.S. degree in Sociology, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(3 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES, GENERAL EDUCATION, or MAJOR REQUIREMENTS)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 9-15 credits

REQUIREMENTS FOR THE MAJOR: 67-73 credits^[1]

(This includes 7 credits of General Education course requirements: 3 credits of GWS courses; 4 credits in GQ courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 46-52 credits

PRESCRIBED COURSES (18-24 credits)

ENGL 202A GWS(3), SOC 1 GS(3) (Sem: 1-4)

SOC 207(3), SOC 400(3), SOC 405(3), SOC 495(3-9) (Sem: 5-8)

ADDITIONAL COURSES (28 credits)

At least 9 of these credits must be at the 400-level

A. Statistics. Select 4 credits from PSYCH 200 GQ(4), STAT 200 GQ(4) (Sem: 1-4)

B. Social Institutions. Select 9 credits from SOC 30(3), SOC 55(3), SOC 403(3), SOC 411 US(3) or HDFS 416 US(3), SOC 416(3), SOC 429(3), SOC 430(3), SOC 446(3), SOC 456/WMNST 456(3) (Sem: 5-8)

C. Social Change and Global Perspectives. Select 9 credits from SOC 15(3), SOC 109(3), SOC 297(3), SOC 424(3), SOC 425(3), SOC 432(3), SOC 445(3), SOC 448(3), SOC 454 US(3) (Sem: 5-8)

D. Diversity. Select 6 credits from AFAM 212 US(3), BESC/WMNST 464 US(3), SOC/AFAM/WMNST 103 US(3), SOC/WMNST 110 GS/US(3), SOC/AFAM 409 US(3), SOC 428(3), SOC 435 or HDFS 434 (3), SOC/RLST 461 US/IL(3), WMNST/CED 420 US/IL(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 21 credits

GENERAL SOCIOLOGY OPTION: (21 credits)

ADDITIONAL COURSES (9 credits)

Select 3 credits from each of sections B, C and D above (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 6 credits (minimum of 3 credits at the 400-level) in consultation with adviser from AAAS, AFAM, BESC, GEOG, SOC (Sem: 5-8)

Select 6 credits (minimum of 3 credits at the 400-level) in consultation with adviser from AMST, ANTH, ART, ARTH, COMM, CRIMJ, ENGL, HDFS, HIST, IHUM, MGMT, MUSIC, PLSC, PSYCH, PUBPL, THEA, WMNST (Sem: 5-8)

COMMUNITY ORGANIZATION AND SOCIAL SERVICES OPTION: (21 credits)

PRESCRIBED COURSES (6 credits)

BESC 370(3) (Sem: 5-8)

SOC 5 GS(3) (Sem 1-4)

ADDITIONAL COURSES (9 credits)

Select 3 credits from each of A, B, and C below (Sem: 5-8)

A. Organization and Leadership: BESC 376(3), BESC 408(3), MGMT 321(3), MGMT 331(3)

B. Community Contexts: SOC 15(3), SOC 103 US(3), SOC 406(3), SOC 412(3)

C. Group Processes and Dynamics: BESC 407(3), BESC 459(3), SOC 3 GS(3), SOC 403(3), SOC 404(3)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Choose 6 credits (minimum of 3 credits at the 400-level) in consultation with adviser from AFAM, AMST, ANTH, ART, ARTH, BESC, COMM, CRIMJ, ENGL, GEOG,

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HDFS, HIST, IHUM, MGMT, MUSIC, PLSC, PSYCH, PUBPL, SOC, THEA, WMNST (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-021

Review Date: 10/7/2014

UCA Revision #2: 7/30/07

CL

Social Data Analytics

University Park, College of the Liberal Arts (SODA)

Professor Lee Ann Banaszak, *Head, Department of Political Science*

Social Data Analytics is an interdisciplinary major that prepares students to participate in both a research environment where “big data” is a major source of insight into social and political processes, and an economy increasingly organized around data analytics. Students completing the major will have the technical skills to handle, analyze, apply and present big data, and the disciplinary knowledge to draw valid inferences from such information to address real world problems. The program integrates coursework in the social sciences with courses in statistics, mathematics, information science and computer science to develop the unique skill set necessary to conceptualize data sources in relation to the social conditions from which they arise; to think critically about big data in relation to specific problems; and to derive and test hypotheses through application of data tools and techniques. Students will gain valuable practical experience working with data through a capstone experience and participation in faculty research.

This major is intended to produce graduates who are big picture thinkers with the knowledge to formulate good questions and leverage vast stores of unstructured data in answering them. Students will be prepared for careers in government, business, healthcare, and industry. The major also provides a strong foundation for advanced study in social science, law, business and public policy.

Admission to the major requires a grade of C or better in MATH 110 or 140, MATH 111 or 141, and CMPSC 122, and a grade of B or better in PL SC 309. These courses must be completed by the end of the semester during which the admission to major process is carried out.

For the B.S. degree in Social Data Analytics, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 90-92 credits [1]

(This includes 15 credits of General Education courses: 6 credits of GQ courses, 6 credits of GS courses, and 3 credits of GH courses.)

PRESCRIBED COURSES (54 credits)

PLSC 1 GS(3), PLSC 10 GS(3), CMPSC 121 GQ(3), CMPSC 122(3), IST 210(3) (Sem: 1-2)

PLSC 309(3), SODA 308(3), MATH 220 GQ(3), CMPSC 221(3), CMPSC 360(3), STAT 318(3), DS 220(3) (Sem: 3-4)

DS 310(3), DS 330(3), STAT 380(3) (Sem: 4-6)

DS 300(3), SODA 496(6) (Sem: 7-8)

ADDITIONAL COURSES (36-38 credits)

Select 4 credits from MATH 110 GQ(4) or MATH 140 GQ(4) (Sem: 1-2)

Select 2-4 credits from MATH 111 GQ(2) or MATH 141 GQ(4) (Sem: 1-2)

Select 3 credits from PLSC 3 GS;IL(3), PLSC 7 GS(3), PLSC 14 GS;IL(3), PLSC 17 GS(3) (Sem: 1-4)

Select 3 credits from PHIL 107 GH(3), STS 101 GH(3), PHIL 106 GH(3), PHIL 233 GH(3), PHIL 406(3), PHIL 407(3) (Sem: 1-4)

Select 15 credits of PLSC courses; at least 12 credits must be at the 400 level and at least 9 credits must be data intensive courses from a department list, including but not limited to PLSC 404(3), PLSC 429(3), PLSC 447(3), PLSC 476(3) (Sem: 3-8)

Select 9 credits from CMPSC 431(3), CMPSC 448(3), CMPSC 465(3), DS 320(3), DS 402(3), DS 410(3), STAT 319(3), STAT 440(3), STAT 464(3) and Analytics courses from a department list.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-112

Review Date: 8/23/2016

Special Education

University Park, College of Education (SPLED)

PROFESSOR KATHLEEN MCKINNON, *Coordinator of Teacher Education in Special Education*

The emphasis throughout the Special Education program is upon a broad clinical teaching model. Course work and practicum experiences focus upon the diagnosis and management of a wide range and degree of educational and behavioral problems of students with disabilities between the ages of 3 and 21. A core of Special Education courses aimed at general skill development in the areas of diagnosis, prescription, development of materials and teaching strategies, implementation, and evaluation is required of all students.

This major focuses on teaching principles and methodologies, classroom and behavioral management, and the development of teaching materials for children and youths with mild, moderate, and severe disabilities. This program helps prepare special education teachers to meet the needs of students enrolled in elementary and secondary public school special education programs.

Baccalaureate degree candidates must meet the following requirements 1-3 by the end of their third semester:

1. A minimum cumulative grade point average of 3.00
2. Satisfaction of any basic-skills or entrance testing requirements as specified by the Pennsylvania Department of Education in force at the time of application for entrance to the major.
3. Documentation of at least 80 hours of volunteer or paid education work experience with learners of the age group the candidate plans to teach. Candidates for Special Education must document two separate 40-hour experiences in two different settings, with learners who have special needs. One experience should include learners with a different level of severity or functioning (e.g., mild/severe, young/adult) from those learners in the other experience. One experience should also include learners with cultural, social, or ethnic backgrounds different from the candidates own.

Requirements 4-9 must be met by the end of the fourth semester when students typically participate in the Entrance to Major process.

4. A grade of "C" or better in all specified courses.
5. Completion of an early field experience specified by the certification program.
6. Completion of a core of Education courses specified by the certification program.
7. Completion of additional credits as specified by the certification program.
8. Completion of at least 48 semester credit hours, including ENGL 15 GWS(3) or ENGL 30 GWS(3), three credits of literature, and six credits of quantification.
9. Approval from the professional education adviser or the head of the pertinent certification program.

For the B.S. degree in Special Education, 122 credits are required. (See also [Teacher Education Programs](#).)

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(12-15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selections)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 3 credits [\[19\]](#)

REQUIREMENTS FOR THE MAJOR: 86 credits [\[21\]](#)

(This includes 12 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses.)

PRESCRIBED COURSES (86 credits)

EDPSY 10 GS(3), EDPSY 14(3), EDPSY 101 GQ(3), EDTHP 115 US(3), MATH 200 GQ(3), PSYCH 100 GS(3), PSYCH 212 GS(3) (Sem: 1-4)

Red Cross Certification in First Aid and CPR(0) (Sem: 1-8)

EDPSY 421(3), SPLED 395(3), SPLED 401(4), SPLED 404(3), SPLED 408(3), SPLED 411(3), SPLED 412(4), SPLED 454(4), SPLED 425(4), SPLED 495E(3) (Sem: 5-6)

SPLED 409A(3), SPLED 409B(3), SPLED 409C(3), SPLED 418(3), SPLED 495F(15), SPLED 495G(4) (Sem: 7-8)

Integrated B.S. in Special Education - M.Ed. in Curriculum and Instruction

The Special Education and Curriculum and Instruction with Emphasis in Language and Literacy Education Integrated Undergraduate-Graduate (SE/CI-LL ED IUG) Degree Program consists of integration of required courses for a B.S. in Special Education with courses required for certification as a Reading Specialist and a M.Ed. in Curriculum and Instruction with emphasis in Language and Literacy Education. The five-year, SE/CI-LLED IUG is an option for highly qualified students seeking certification to teach Special Education in Pennsylvania in grades K-12. Completion of the IUG (along with earning a passing score on PDE required PRAXIS tests) leads to a B.S. in Special Education, certification in Special Education and as a Reading Specialist in the state of Pennsylvania, and a M.Ed. in Curriculum and Instruction. Students are expected to complete courses required for the graduate level K-12 reading specialist concurrent with their undergraduate experiences and coursework in Special Education and will complete a capstone Special Education teaching experience in their final semester.

Time of Admission to SE/CI-LLED IUG

Students wishing to apply for admission to the SE/CI-LLED IUG initiate application during the semester in which they complete SPLED 495E. They finalize the application process at the end of the semester with a grade of B or better in SPLED 412. While this is typically the end of the junior year of study, it may fall sooner or later.

Joint Admission Process

Special Education and Curriculum and Instruction are located in the College of Education, with Reading Specialist certification offered through the Department of Curriculum and Instruction's emphasis area in Language and Literacy Education. Admission to the SE/CI-LLED IUG will be based upon having attained a minimum GPA of 3.5 or higher, with a grade of B or better in SPLED 412.

Admission will be based on a recommendation by the Reading Specialist Program Coordinator in consultation with the Coordinator of Teacher Education in Special Education.

Students will be expected to maintain a minimum GPA of 3.0 throughout the IUG program of study. Failure to do so will result in the student being placed on academic probation for one semester; after which time, if the GPA is not 3.0 or higher, the student will be dropped from the IUG.

If the student decides not to continue enrollment in the joint SE/CI-LLED IUG, the student may, contingent upon fulfilling all other requirements for the B.S. in SPLED, complete SPLED 495 (the traditional capstone field experience) in their final semester and graduate with a B.S. in Special Education.

Advising

Beginning during the application process, as well as subsequent to admission, students should communicate with both their SPLED program adviser and the program adviser for the C I Reading Specialist program to ensure requirements of both programs are met.

Reduced Course Load

EDPSY 421 and LLED 595A may be double counted for the M.Ed. as well as the B.S. degree.

Tuition Charges

Undergraduate tuition rates will apply as long as the student is an undergraduate, unless the student receives financial support, for example, an assistantship requiring payment of graduate tuition (from "Information and Guidelines for Establishing Integrated Undergraduate-Graduate Degree Programs" - approved by the Graduate Council, May 8, 1996).

[19] Students may apply 3 credits of ROTC.

[21] A grade of C or better per course is required for all Special Education prerequisites and teacher certification.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-05-032

Review Date: 2/24/2015

R & T: 01/14/2014

UCA Revision #1: 8/14/06

ED

Coordinator updated: 8/21/08

Spanish

University Park, College of the Liberal Arts (SPNBA)

PROFESSOR PAOLA (GIULI) DUSSIAS, *Head*

This major is designed to develop basic skills in speaking, understanding, reading, and writing Spanish. In addition, the program aims to acquaint students with the literature and civilization of the Hispanic world and introduce them to the study of Hispanic linguistics. Enough flexibility is provided to permit a degree of concentration in either Hispanic literature or linguistics. Specialized courses are offered in translation techniques and in the use of Spanish for social services. Courses taken in the University's Education Abroad Program in Spain and Mexico may be applied to the major. In conjunction with the College of Education, students may take work leading to certification as Spanish teachers in the secondary or elementary schools.

Combined with course work in business, social welfare, or bilingual education, the B.A. in Spanish can facilitate entry into a number of professional areas. In addition, it provides the traditional foundation for advanced degree work required for such careers as college teaching and government service. Students are eligible to participate in the University's Education Abroad Programs.

For the B.A. degree in Spanish, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or BACHELOR OF ARTS DEGREE REQUIREMENTS course selections)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits [\[1\]](#)

PRESCRIBED COURSES (6 credits)
SPAN 215(3) (Sem: 3-6)
SPAN 253W(3) (Sem: 3-8)

ADDITIONAL COURSES (12 credits)
Select 3 credits from: SPAN 100(3) or SPAN 100A(3)* or SPAN 100B(3) or SPAN 100C(3) (Sem: 2-6)
Select 3 credits from: SPAN 200(3) or SPAN 301(3) (Sem: 2-6)
Select 3 credits of 400-level Hispanic Literature: SPAN 439(3), SPAN 472(3), SPAN 476(3), SPAN/LTNST 479 GH;US(3); SPAN 488(3); SPAN 490(3), SPAN 497(1-9) (Sem: 5-8)
Select 3 credits of 400-level Hispanic Linguistics: SPAN 418(3), SPAN 497(1-9) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (18 credits)
Select 9 credits from the following 200- and 300-level course list: SPAN 210(3), SPAN 220(3), SPAN 297(3), SPAN 299 IL(3), SPAN 300(3), SPAN 305(3), SPAN 314(3), SPAN 316(3), SPAN 353(3), SPAN 354(3), SPAN 355(3), SPAN 356(3), SPAN 397(3), SPAN 399 IL(3) (Sem: 3-8)

Select 9 credits from the following 400-level course list: SPAN 410(3)*, SPAN 412(3), SPAN 413(3), SPAN 418(3), SPAN 420(3), SPAN 439(3), SPAN 472(3), SPAN 476(3), SPAN 479(3), SPAN 488(3), SPAN 490(3), SPAN 497(3), SPAN 499 IL(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

* Heritage speakers (students with Spanish language in family background but not necessarily a native speaker) should take SPAN 100A and SPAN 301 instead of SPAN 100 and SPAN 110.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-05-044

Review Date: 2/21/2017

LA

Spanish

University Park, College of the Liberal Arts (SPNBS)

PROFESSOR PAOLA (GIULI) DUSSIAS, *Head*

This major encourages students to prepare for careers in which fluency in Spanish can be combined with training in other academic disciplines.

For the B.S. degree in Spanish, a minimum of 122 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(0-13 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 17-19 credits

REQUIREMENTS FOR THE MAJOR: 60-71 credits [\[1\]](#)
(This includes 0-13 credits of General Education courses: 0-4 credits of GQ courses; 0-6 credits of GS courses, 0-3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 21 credits

PRESCRIBED COURSES (6 credits)
SPAN 215(3), SPAN 253W(3) (Sem: 3-6)

ADDITIONAL COURSES (15 credits)
SPAN 100(3) or SPAN 100A(3)* or SPAN 100B(3) or SPAN 100C(3) (Sem: 2-6)
SPAN 200(3) or SPAN 301(3)* (Sem: 2-6)
Select 9 credits from SPAN 210(3), SPAN 220(3); SPAN 297(3); SPAN 299 IL(3); SPAN 300(3), SPAN 305(3), SPAN 314(3); SPAN 316(3); SPAN 353(3), SPAN 354(3), SPAN 355(3), SPAN 356(3), SPAN 397(3); SPAN 399 IL(1-12) (Sem: 3-8)

REQUIREMENTS FOR THE OPTION: 39-50 credits

APPLIED SPANISH OPTION: (39 credits)
This option is designed to develop basic skills in Spanish (speaking, understanding, reading, writing) and to provide Spanish majors with concentration in a professional area where a command of Spanish can be particularly relevant and useful. Students are eligible to participate in the University's Education Abroad Programs.

ADDITIONAL COURSES (18 credits)
Select 3 credits from 400-level Spanish literature: : SPAN 439(3), SPAN 472(3), SPAN 476(3), SPAN/LTNST 479 GH;US(3), SPAN 488(3), SPAN 490(3), SPAN 497(1-9) (Sem: 5-8)
Select 3 credits 400-level Spanish linguistics: SPAN 418(3), SPAN 497(1-9) (Sem: 5-8)
Select 12 credits from SPAN 410(3), SPAN 412(3), SPAN 413(3), SPAN 418(3), SPAN 420(3), SPAN 439(3), SPAN 472(3), SPAN 476(3), SPAN/LTNST 479 GH;US(3), SPAN 488(3), SPAN 490(3), SPAN 497(1-9), SPAN 499 IL(1-12) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)
Select 21 credits in consultation with the adviser in any related area of study such as social services, the teaching of English as a second language, or in any other professional area in which competency in Spanish is desirable. At least 6 credits of such courses must be at the 400 level. (Sem: 1-8)

BUSINESS OPTION: (50 credits)
This option is designed to develop basic skills in Spanish (speaking, understanding, reading, writing) and to acquaint students with a number of fields essential to business, especially in the international area. Courses in translation techniques, Spanish civilization, and Ibero-American civilization are an integral part of the option. Students are eligible to participate in the University's Education Abroad Programs.

PRESCRIBED COURSES (25 credits)
ACCTG 211(4), ECON 102 GS(3), ECON 104 GS(3), ECON 333 GS(3), ENGL 202D GWS(3), I B 303 IL(3), I B 403(3), SPAN 420(3) (Sem: 1-8)

ADDITIONAL COURSES (25 credits)
Select 4 credits from SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-8)
Select 3 credits from: BA 301(3); FIN 301(3) (Sem: 1-8)
Select 3 credits from: BA 304(3); MGMT 301(3) (Sem: 1-8)
Select 3 credits from: BA 303(3); MKTG 301(3) (Sem: 1-8)
Select 12 credits from SPAN 410(3), SPAN 412(3), SPAN 413(3), SPAN 418(3), SPAN 439(3), SPAN 472(3), SPAN 476(3), SPAN/LTNST 479 GH;US(3), SPAN 488(3), SPAN 490(3), SPAN 497(1-9), SPAN 499 IL(1-12) (Sem: 5-8)

* Heritage speakers (students with Spanish language in family background) and native speakers of Spanish should take SPAN 100A and SPAN 301 instead of SPAN 100 and SPAN 200. May not take SPAN 410.

Integrated Spanish B.S. and Human Resources and Employment Relations M.S. Degree Programs (SPHRER)

PROFESSOR MARK WARDELL, *in charge*

The integrated Spanish B.S. and HRER M.S. is a five-year program designed for highly qualified and motivated students seeking employment within a culturally diverse workplace. Students will develop basic skills in speaking, understanding, reading, and writing Spanish. Students will gain familiarity with Hispanic cultures through literature and the University's Education Abroad Program, if they choose to have that experience. Students also will learn about (1) the roles of employers, employees, employee organizations, and public policy makers play in the employment relationship, (2) the complex personal and organizational issues inherent in the employment relationship, and (3) how to systematically analyze those complex issues and evaluate research relevant to those analyses.

For the B. S./M. S. degree in Integrated Spanish B.S. and Human Resources and Employment Relations M.S., a minimum of 154 credits is required. Twelve graduate level credits can apply to both undergraduate and graduate degrees; six of these must be at the 500 level. Students can complete the B.S. in Spanish and not advance to the M.S. HRER degree if they desire.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

BACHELOR OF SCIENCE

GENERAL EDUCATION: 45 credits

(10 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*).

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

REQUIREMENTS FOR THE MAJOR: 101 credits

(This includes 10 credits of General Education courses: 6 credits of GS courses; 4 credits of GQ courses.)

PRESCRIBED COURSES (27 credits)

[Some courses in this category have prerequisites that are not included in the major]

SPAN 100(3), SPAN 120(3), SPAN 200(3), SPAN 253W(3), SPAN 305(3) (Sem: 1-6)

SPAN 400(3), SPAN 410(3), SPAN 412(3), SPAN 414(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

SPAN 210(3) or SPAN 220(3), SPAN 353(3) or SPAN 354(3) (Sem: 3-6)

SPAN 472(3) or SPAN 476(3) (Sem: 5-8)

Select 3 credits of SPAN 413(3), SPAN 415(3), SPAN 418(3), SPAN 420(3), SPAN 439(3), SPAN 490(3), SPAN 491(3), or SPAN 497(1-9) (Sem: 5-8)

LABOR AND EMPLOYMENT RELATIONS: (32 credits)

[Prescribed undergraduate credits in Labor and Employment Relations option]

ECON 102 GS(3), LER 100 GS(3), LER 201(3), LER 312(4), LER 400 IL(3), LER 414W(3), LER 458Y US(3), STAT 200 GQ(4) (Sem: 1–6)

HRER 501(3), HRER 512(3) (Sem: 7–8)

Master of Science

EMPLOYMENT RELATIONS/HUMAN RESOURCES M.S.: (30 credits)

[HRER credits to be selected from the following in consultation with an HRER adviser]

HRER 500, HRER 502, HRER 504, HRER 505, HRER 513, HRER 516, HRER 535, HRER 536, HRER 595*, HRER 596*, HRER 597, HRER 599

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

* Heritage speakers (students with Spanish language in family background but not necessarily a native speaker) should take SPAN 100A and SPAN 301W instead of SPAN 100 and SPAN 300W.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-113 (SPNBS); 35-06-466 (Integrated)

Review Date: 8/23/2016

[Comments](#)

LA

Security and Risk Analysis

Penn State Altoona (SRAAL)

Penn State Berks (SRABL)

Penn State Harrisburg (SRACA)

University Park, College of Information Sciences and Technology (SRA)

World Campus (SRAWC_BS)

Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies, College of IST

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

The Bachelor of Science in Security and Risk Analysis (SRA) in the College of Information Sciences and Technology is intended to familiarize students with the general frameworks and multidisciplinary theories that define the area of security and related risk analyses. Courses in the major will engage students in the challenges and problems associated with assuring information confidentiality and integrity (e.g., social, economic, technology-related, and policy issues), as well as the strengths and weaknesses of various methods for assessing and mitigating associated risk.

The major provides a grounding in the analysis and modeling efforts used in information search, visualization, and creative problem solving. This knowledge is supplemented through an examination of the legal, ethical, and regulatory issues related to security that includes analyzing privacy laws, internal control and regulatory policies, as well as basic investigative processes and principles. Such understanding is applied to venues that include transnational terrorism, cyber crimes, financial fraud, risk mitigation, and security and crisis management. It also includes overviews of the information technology that plays a critical role in identifying, preventing and responding to security-related events.

Advisory groups from within and outside the University involved in the design of the major have agreed that graduates who can understand the cognitive, social, economic, and policy issues involved in security and risk management as well as the basics of the information technology and analytics that are included in the security/risk arena will be very successful. These observations drove the design and objectives of the SRA major.

SRA majors will choose one of the following options:

INTELLIGENCE ANALYSIS AND MODELING OPTION. This option focuses on developing a more thorough knowledge of the strategic and tactical levels of intelligence collection, analysis, and decision-making. This includes examining the foundations of decision analysis, economic theory, statistics, data mining, and knowledge management, as well as the security-specific contexts in which such knowledge is applied.

INFORMATION AND CYBER SECURITY OPTION. This option includes a set of courses that provides an understanding of the theories, skills, and technologies associated with network security, cyber threat defense, information warfare, and critical infrastructure protection across multiple venues.

Entrance Requirements: To be eligible for entrance to the Security and Risk Analysis (SRA) major, students must:

1. have completed the following entrance-to-major requirements with grades of C or better in each: IST 140(3) (or equivalent CMPSC 101 GQ(3) or CMPSC 121 GQ(3)), IST 210(3), SRA 111(3); and SRA 211(3).
2. have achieved a minimum cumulative grade point average of 2.00 prior to and through the end of the semester during which the entrance-to-major procedure is carried out.

The Integrated Undergraduate Graduate (IUG) program is available for strong undergraduate students who wish to pursue a bachelor's and master's degree in a shorter period of time than would be necessary if the degrees were pursued separately. Security and Risk Analysis undergraduates may apply for admission to the SRABS/ISTMS IUG program as early as the end of their sophomore year but no later than the end of their junior year after completing a minimum of 60 credits, if they meet the following admission requirements:

1. Must be enrolled in the SRABS undergraduate degree program.
2. Must have completed 60 credits of an SRABS undergraduate degree program.
3. Must apply to the IUG program by the end of their junior year.
4. Must apply to and be accepted without reservation into the Graduate School and M.S. program in IST. Students must complete the [Graduate School application](#).
5. Must have an overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
6. Must present an approved plan of study. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
7. Must present two letters of recommendation from faculty members. (Note: For Schreyer Honors College students, these can be the same two letters required by the Schreyer Honors College.)
8. Must meet with both the Director of Undergraduate Academic Affairs and the Graduate Program Coordinator to declare interest and receive information about the IUG program.

For Schreyer Honors College students, students admitted to the IUG program may double-count a maximum of 12 credits toward their graduate and undergraduate degrees in Information Sciences and Technology. Thesis or scholarly paper credits may not double-count.

For the B.S. degree in Security and Risk Analysis, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in front of the *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 4 credits

REQUIREMENTS FOR THE MAJOR: 92 credits

(This includes 21 credits of General Education courses: 6 credits of GQ courses; 6 credits of GS courses; 3 credits of GWS courses, 3 credits of GH, and 3 credits of GN courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 71 credits

PRESCRIBED COURSES (35 credits)

CMPSC 101 GQ(3) [\[11\]](#), SRA 111 GS(3) [\[11\]](#) (Sem: 1-2)

IST 110 GS(3) [\[11\]](#) (Sem: 1-3)

IST 210(3) [\[11\]](#) (Sem: 1-4)

SRA 211(3) [\[11\]](#), SRA 221(3) [\[11\]](#), SRA 231(3) [\[11\]](#) (Sem: 2-4)

STAT 200 GQ(4) (Sem: 3-6)

IST 495(1) [\[11\]](#) (Sem: 3-8)

IST 432(3) [\[11\]](#), SRA 311(3) [\[11\]](#), IST 440(3) [\[11\]](#) (Sem: 7-8)

ADDITIONAL COURSES (15 credits)

AGBM 101 GS(3) or ECON 102 GS(3) (Sem: 1-4)

PLSC 1 GS(3), PLSC 14 GS;IL(3), or GEOG 40 GS;IL(3) (Sem: 1-4)

PSYCH 100 GS(3) or SOC 5 GS(3) (Sem: 1-6)
 ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 5-8)
 SRA 365(3) [\[1\]](#); STAT 460(3) [\[1\]](#) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Attainment of third-level proficiency in a single foreign language (12 credits). Proficiency must be demonstrated by either examination or course work. See the admission section of the general information in this *Bulletin* for the placement policy for Penn State foreign language courses. (Sem: 1-4)
 Select 3 credits of INatural Sciences (GN) in consultation with adviser (Sem: 1-6)
 Select 6 credits of international courses from College-approved list or other courses approved by adviser. (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 21 credits**INTELLIGENCE ANALYSIS AND MODELING OPTION:** (21 credits)**PRESCRIBED COURSES** (12 credits) [\[1\]](#)

ECON 302 GS(3), SRA 421(3) (Sem: 3-6)
 SRA 433(3), SRA 468(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from College-approved list (at least 3 credits must be at the 400-level) (Sem: 5-8)

INFORMATION AND CYBER SECURITY OPTION: (21 credits)**PRESCRIBED COURSES** (12 credits) [\[1\]](#)

IST 220(3) (Sem: 1-6)
 IST 451(3), IST 454(3), IST 456(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from College-approved list (at least 3 credits must be at the 400-level) (Sem: 5-8)

Integrated B.S. in Security and Risk Analysis / M.S. in Information Sciences and Technology

The College of Information Sciences and Technology offers an integrated B.S./M.S. (IUG) program designed to allow academically superior students in the Security and Risk Analysis major to obtain both the Bachelor's in Security and Risk Analysis and the M.S. degree in Information Sciences and Technology in a shorter period of time than would be necessary if the degrees were pursued separately. The first two to three years of undergraduate coursework follow the same undergraduate curriculum that other students follow in the Security and Risk Analysis major. Interested students may apply for admission to the IUG program as early as the end of their sophomore year but no later than the end of their junior year after completing a minimum of 60 credits. If admitted to the IUG, the final years of study include two graduate courses, Foundations of Theories and Methods of Information Sciences and Technology Research (IST 504) in the fall and Foundations of Research Design in Information Sciences and Technology (IST 505) in the spring, plus six credits of research methods courses, twelve credits of graduate specialty courses, and six credits of graduate thesis (IST 600) or scholarly paper (IST 594).

(Note: For Schreyer Honors College students, those who complete the graduate thesis for the Master's requirement may use the graduate thesis, itself, to fulfill the undergraduate honors thesis requirement, as well. Honors students who opt for the Master's scholarly paper must also complete an undergraduate honors thesis.)

The integrated B.S. in Security and Risk Analysis / M.S. in Information Sciences and Technology (IUG) degree meets the needs of the most academically talented students in the Security and Risk Analysis undergraduate major. A proportion of these successful students wish to pursue graduate studies sometime after graduation. Offering the IUG benefits these students by offering an accelerated path to a graduate degree. Additionally, the IUG program can provide these students with a more cohesive program of study with opportunities to engage in more comprehensive research leading to both the bachelor's and master's degree.

For the B.S. in Security and Risk Analysis / M.S. in Information Sciences and Technology IUG program, a minimum of 120 credits is required for the bachelor's degree and 30 credits for the M.S. degree. Students admitted to the IUG program may double-count a maximum of 12 credits to their graduate and undergraduate degrees. The required 6 credits of IST 504 and IST 505 will apply to both the graduate program and the undergraduate program. Students may choose an additional 6 credits to double-count for both the undergraduate and graduate degrees from the following: SRA 433, SRA 468, SRA 471, IST 451, IST 452, IST 454, IST 456. Graduate thesis or scholarly paper credits may not double-count.

The objectives of the Integrated Undergraduate Graduate Program include:

1. To offer highly qualified students the opportunity to earn two degrees in less time than it would take to do two sequential degrees. In particular, IUG students may count up to 12 credits towards both their B.S. and M.S. degree requirements.
2. To permit coherent planning of studies through the graduate degree, with advising informed by not only the requirements of the baccalaureate program, but also the longer-range goals of the graduate degree.
3. To introduce undergraduate students to the rigors of both graduate study and graduate faculty.
4. To make the resources of the Graduate School available to IUG students.
5. To allow students with IUG status to benefit from their association with graduate students whose level of work and whose intensity of interest and commitment parallel their own.

Admission Requirements

To initiate the application process, students must submit an *Integrated Undergraduate-Graduate (IUG) Degree in Security and Risk Analysis Form*, a transcript, and two letters of recommendation (both from faculty members) to the IST Graduate Programs Office. The Director of Undergraduate Academic Affairs, in consultation with the Graduate Programs Coordinator, will help undergraduate candidates determine a proposed sequence of courses that will prepare them for acceptance into the Integrated Undergraduate-Graduate (IUG) degree program. Acceptance into the IST IUG program will be determined by the Graduate Recruitment Committee.

Security and Risk Analysis undergraduate majors may apply for admission no earlier than February 15th of their sophomore year and no later than February 15th of their junior year after completing a minimum of 60 credits, if they meet the following admission requirements:

1. Must be enrolled in the SRA (BS) undergraduate degree program.
2. Must have completed 60 credits of an SRABS undergraduate degree program.
3. Must apply to the IUG program by the end of their junior year.
4. Must apply to and be accepted without reservation into the Graduate School and M.S. program in IST. Students must complete the [Graduate School application](#).
5. Must have an overall GPA of 3.5 (on a 4.0 scale) in undergraduate coursework and a minimum GPA of 3.5 in all coursework completed for the major.
6. Must present an approved plan of study. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser.
7. Must present two letters of recommendation from faculty members. (Note: For Schreyer Honors College students, these can be the same two letters required by the Schreyer Honors College.)
8. Must meet with both the Director of Undergraduate Academic Affairs and the Graduate Program Coordinator to declare interest and receive information about the IUG program.

For Schreyer Honors College students, students must also follow guidelines and procedures for applying for IUG in the Schreyer Honors College:

<http://www.shc.psu.edu/students/iug/program/>

In addition, applicants must apply to and be admitted to the Graduate School of the Pennsylvania State University at the time of their application to the IUG

degree program.

These admission standards are high, as it is thought the program will only be appropriate for students with high levels of academic skills. The program area does have discretion in admitting Security and Risk Analysis majors into the integrated program, and extenuating circumstances can always be considered in terms of possible admission. Individuals who are unable to be admitted into the integrated program of study can apply for regular admission to the graduate program when they complete their undergraduate program of study.

Sample Sequence of Graduate Coursework in Addition to Undergraduate Courses

Year	Fall	Spring	MS Credits
Year 1 (Senior Undergraduate Year)	IST 504: Foundations (3) Methods course (3)** IST 600 or IST 594	IST 505: Research Design (3) Methods course (3)** IST 600 or IST 594	
Year 2 (Super Senior Undergraduate Year)	Thesis Research (3) Grad Specialty Course (3)*** Grad Specialty Course (3)***	Thesis Research (3) Grad Specialty Course (3)*** Grad Specialty Course (3)***	30*

* Students admitted to the IUG program may double-count a maximum of 12 credits toward their graduate and undergraduate degrees in Information Sciences and Technology. In their senior year, IUG students will take 6 credits of specified graduate work, courses IST 504 and IST 505, and 6 credits of methods courses. These 6 credits of IST 504 and IST 505 will apply to both the graduate program and the undergraduate IST/SRA support option requirement. In their super senior year, students may choose an additional 6 credits to double-count for both the undergraduate and graduate degrees. These courses must be at the 400-level or above. Students may choose any 400-level undergraduate Option course (SRA 433, SRA 468, SRA 471, IST 451, IST 452, IST 454, IST 456) that they are using to fulfill an undergraduate option requirement and apply the credits to both the undergraduate option requirement and the graduate specialty course requirement. Credits associated with the thesis or culminating scholarly paper, i.e., IST 600 and IST 594, may not be double-counted. However, for Schreyer Honors College students, the Master's thesis deliverable, itself, may double-count for the undergraduate thesis deliverable requirement.

** Choose graduate level methods course after consultation in advance with the student's faculty adviser.

*** Choose any 400 or 500 level course that contributes to the student's chosen area of specialty with a maximum of six credits at the 400 level.

The total resulting credits will be a minimum of 150 credits, with 120 credits completed for the undergraduate SRA degree. Twelve graduate credits will be completed in the senior year, and the remaining 18 graduate credits will be completed in the super senior year.

If for any reason a student admitted to the B.S./M.S. program is unable to complete the requirement for the Master of Science degree program in Information Sciences and Technology, the student will be permitted to receive the SRA bachelor's degree assuming all degree requirements have been satisfactorily completed.

Student performance will be monitored on an on-going basis by the student's adviser and Graduate Programs. Students admitted to the integrated program must maintain a minimum cumulative GPA of a 3.3 overall and a minimum 3.0 GPA in all courses used toward the M.S. degree in order to maintain good academic standing and meet graduation requirements. (See information on Grade-Point Average in the Graduate Bulletin: <http://bulletins.psu.edu/graduate/degree/requirements/masters/>) For SHC students in the IUG program, students must maintain a minimum cumulative GPA of 3.4 overall and a minimum 3.0 GPA in all courses used toward the M.S. degree in order to maintain good academic standing and meet graduation requirements. Successful completion of a Schreyer Scholar's Master's thesis will be accepted as completion of the honors thesis requirement.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-088

Review Date: 8/22/2017

UCA Revision #1: 8/14/06

UCA Revision #2: 7/30/07

[Comments](#)

IS

Statistics

University Park, Eberly College of Science (STAT)

PROFESSOR DAVID HUNTER, Head, Department of Statistics

This major helps prepare students with interests in mathematics, computation, and the quantitative aspects of science for careers in industry and government as statistical analysts, or for further graduate training in statistics. The major includes five options: An Actuarial Statistics Option for students interested in working as actuaries in the insurance or business fields; an Applied Statistics Option for students interested in a cross-disciplinary program, such as econometrics, or psychometrics; a Biostatistics Option for students interested in pursuing careers with pharmaceutical companies, research hospitals or other fields in which biological data is analyzed; a Graduate Study Option for students planning to go to graduate school in a statistics-related field; and a Statistics and Computing Option for students wishing to combine statistical expertise with programming skills.

In order to be eligible for entrance into the Statistics major, a student must have: 1) Attained at least a 2.00 cumulative grade point average. 2) Completed MATH 140 GQ(4) and MATH 141 GQ(4); and earned a grade of C or better in each of these courses.

For the B.S. degree in Statistics a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6-15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of *Bulletin*.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in GENERAL EDUCATION course selection or REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 80-95 credits

(This includes 6-15 credits of General Education: 0-9 credits of GN courses; 6 credits of GQ courses, 0-6 credits of GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 38-41 credits

PRESCRIBED COURSES (37-38 credits)

MATH 140 GQ(4)[\[1\]](#), MATH 141 GQ(4)[\[1\]](#) (Sem: 1-2)
MATH 220 GQ(2-3)[\[1\]](#), MATH 230(4)[\[1\]](#), STAT 184 (1)[\[1\]](#), STAT 200 GQ(4)[\[1\]](#), STAT 380 (3)[\[1\]](#), STAT 414(3)[\[1\]](#), STAT 415(3)[\[1\]](#) (Sem: 3-4)
STAT 461(3)[\[1\]](#), STAT 462(3)[\[1\]](#), STAT 470(3)[\[1\]](#) (Sem: 5-8)

ADDITIONAL COURSES (1-3 credits)

STAT 480 (1)[\[1\]](#); STAT 481 (1)[\[1\]](#); STAT 482 (1)[\[1\]](#); STAT 483 (3)[\[1\]](#)

REQUIREMENTS FOR THE OPTION: 47-57 credits

ACTUARIAL STATISTICS OPTION: 53 credits

Students who major in statistics with the actuarial statistics option and who wish to complete a concurrent major in mathematics may not choose the actuarial mathematics option in mathematics. Any other option in mathematics is acceptable.

PRESCRIBED COURSES (28 credits)

ECON 102 GS(3), ECON 104 GS(3) (Sem: 1-4)
ACCTG 211(4)[\[1\]](#) (Sem: 3-4)
FIN 301(3)[\[1\]](#), RM 302(3)[\[1\]](#), RM 410(3)[\[1\]](#), RM 411(3)[\[1\]](#), RM 412(3)[\[1\]](#), STAT 463(3)[\[1\]](#) (Sem: 4-8)

ADDITIONAL COURSES (12 credits)

Select 3 credits from: CMPSC 101 GQ(3)[\[1\]](#), CMPSC 102(3)[\[1\]](#), CMPSC 121 GQ(3)[\[1\]](#), CMPSC 200 GQ(3)[\[1\]](#), CMPSC 201 GQ(3)[\[1\]](#), or CMPSC 202 GQ(3)[\[1\]](#) (Sem: 1-4)

Select 9 credits from IE 434(3)[\[1\]](#); IE 436(3)[\[1\]](#); MATH 436(3)[\[1\]](#) or MATH 441(3)[\[1\]](#); MATH 451(3)[\[1\]](#) or MATH 455(3)[\[1\]](#); STAT 416(3)[\[1\]](#), STAT 440(3)[\[1\]](#), STAT 464(3)[\[1\]](#), STAT 466(3)[\[1\]](#) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (13 credits)

Select 13 credits from department list (Sem: 1-8)

APPLIED STATISTICS OPTION: (47 credits)

ADDITIONAL COURSES (15 credits)

Select 3 credits from: CMPSC 101 GQ(3)[\[1\]](#), CMPSC 121 GQ(3)[\[1\]](#), CMPSC 201 GQ(3)[\[1\]](#), or CMPSC 202 GQ(3)[\[1\]](#) (Sem: 1-4)
Select 12 credits from IE 434(3)[\[1\]](#); IE 436(3)[\[1\]](#), MATH 436(3)[\[1\]](#) or MATH 441(3)[\[1\]](#), MATH 451(3)[\[1\]](#) or MATH 455(3)[\[1\]](#), STAT 416(3)[\[1\]](#), STAT 440(3)[\[1\]](#), STAT 463(3)[\[1\]](#), STAT 464(3)[\[1\]](#), STAT 466(3)[\[1\]](#) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (32 credits)

Select 32 credits from department list, including a minor in a supporting field other than Mathematics. (Sem: 1-8)

(Neither the mathematics major nor the six sigma minor, nor the risk management major with the actuarial science option may be used to satisfy the minor/concurrent major requirement. If a student wants to work in a supporting field that does not have a minor, he or she can propose a list of six appropriate courses and petition the Statistics Department for approval. It is the student's responsibility to justify the appropriateness of the proposed list. Students must receive a grade of C or better in each of these six courses.)

BIOSTATISTICS OPTION: (56-57 credits)

PRESCRIBED COURSES (8 credits)

BIOL 110 GN(4)[\[1\]](#), CHEM 110 GN(3)[\[1\]](#), CHEM 111 GN(1)[\[1\]](#) (Sem: 1-3)

ADDITIONAL COURSES (28-29 credits)

Select 3 credits from: CMPSC 101 GQ(3)[\[1\]](#), CMPSC 121 GQ(3)[\[1\]](#), CMPSC 201 GQ(3)[\[1\]](#), or CMPSC 202 GQ(3)[\[1\]](#) (Sem: 1-4)

Select 7-8 credits from BIOL 220W GN(4)[\[1\]](#), BIOL 222(3)[\[1\]](#), BIOL 230W GN(4)[\[1\]](#), BIOL 240W GN(4)[\[1\]](#) (Sem: 5-8)

Select 6 credits from 400-level BIOL courses[\[1\]](#) (Sem: 5-8)

Select 12 credits from IE 434(3)[\[1\]](#); IE 436(3)[\[1\]](#); MATH 436(3)[\[1\]](#) or MATH 441(3)[\[1\]](#), MATH 451(3)[\[1\]](#) or MATH 455(3)[\[1\]](#), STAT 416(3)[\[1\]](#), STAT 440(3)[\[1\]](#), STAT 463(3)[\[1\]](#), STAT 464(3)[\[1\]](#), STAT 466(3)[\[1\]](#) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (19-20 credits)

Select 19-20 credits from department list (Sem: 1-8)

GRADUATE STUDY OPTION: (47 credits)

A student completing the Graduate Study option will have earned a minor in mathematics in addition to a B.S. in Statistics. However, a student must fill out and submit the appropriate paperwork to the Mathematics Department in order for this minor to be officially recognized.

PRESCRIBED COURSES (9 credits)

MATH 312(3)[1], MATH 403(3)[1], MATH 404(3)[1] (Sem: 5-8)

ADDITIONAL COURSES (24 credits)

Select 3 credits from: CMPSC 101 GQ(3)[1], CMPSC 121 GQ(3)[1], CMPSC 201 GQ(3)[1], or CMPSC 202 GQ(3)[1] (Sem: 1-4)

Select 9 credits from MATH 310(3)[1], MATH 311W(3-4)[1], MATH 421(3), MATH 422(3)[1], MATH 426(3), MATH 429(3), MATH 456(3)[1], MATH 468(3)[1] (Sem: 7-8)

Select 12 credits from IE 434(3)[1], IE 436(3)[1], MATH 436(3)[1] or MATH 441(3)[1], MATH 451(3)[1] or MATH 455(3)[1], STAT 416(3)[1], STAT 440(3)[1], STAT 463(3)[1], STAT 464(3)[1], STAT 466(3)[1] (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (14 credits)

Select 14 credits from department list (Sem: 1-8)

STATISTICS AND COMPUTING OPTION: (47 credits)

PRESCRIBED COURSES (9 credits)

CMPSC 121 GQ(3)[1], CMPSC 122(3)[1], CMPSC 465(3)[1] (Sem: 1-6)

ADDITIONAL COURSES (24 credits)

Select 3 credits from: CMPSC 360(3)[1] or MATH 311W(3-4)[1] (Sem: 3-6)

Select 9 credits from CMPSC 221(3)[1], 400-level CMPSC [1] other than CMPSC/MATH 451 or CMPSC/MATH 455 (Sem: 5-8)

Select 12 credits from IE 434(3)[1], IE 436(3)[1], MATH 436(3)[1] or MATH 441(3)[1], MATH 451(3)[1] or MATH 455(3)[1], STAT 416(3)[1], STAT 440(3)[1], STAT 463(3)[1], STAT 464(3)[1], STAT 466(3)[1] (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (14 credits)

Select 14 credits from department list (Sem: 1-8)

Integrated B.S. in Statistics and Master of Applied Statistics (M.A.S.)

The Integrated Undergraduate-Graduate (IUG) degree with B.S. in Statistics and Master of Applied Statistics (M.A.S.) is designed to be completed in five years. This integrated degree will enable a select number of highly qualified and career-oriented students to obtain training in statistics focused on developing data analysis skills and exploration of core areas of applied statistics at the undergraduate and graduate levels. The M.A.S. degree is a professional master's degree that emphasizes applications and does not provide as much training in the mathematical and statistical theory. The degree prepares students with interests in mathematics, computation, and the quantitative aspects of science for careers in industry and government as statistical analyst. Research divisions in the pharmaceutical industry, quality control and quality engineering divisions in manufacturing companies, clinical research units, corporate planning and research units, and other data-intensive positions require persons with training in mathematics, computation, database management, and statistical analysis, which this program will provide.

Application Process

The number of openings in the integrated B.S./M.A.S. program is limited. Admission will be based on specific criteria and the recommendation of faculty. Applicants to the integrated program:

1. Must be enrolled in the Statistics B.S. program.
1. Must have completed at least 60 credits of the undergraduate degree program including the two courses: STAT 414 and STAT 415, and the students must apply to the program prior to completing 110 credits.
1. Must submit a transcript and a statement of purpose.
1. Must present a departmental-approved plan of study in the application process in consultation with the M.A.S. program director.
1. Must be recommended by the chair of the department's undergraduate program committee.
1. Must be accepted into the M.A.S. program in Statistics.

For the IUG B.S./M.A.S. degree, 120 credits are required for the B.S. and 30 credits for the M.A.S. The following twelve graduate-level credits (number of credits in parentheses) can apply to both B.S. and M.A.S. degrees; six of these are at the 500 level:

STAT 414 (3) Introduction to Probability Theory
 STAT 415 (3) Introduction to Mathematical Statistics
 STAT 501 (3) Regression Methods
 STAT 502 (3) Analysis of Variance and Design of Experiments

Assuming all requirements for the B.S. are completed, students in the program can complete the B.S. degree and not advance to the M.A.S. Degree if they desire.

Degree Requirements

IUG Statistics B.S. prescribed Statistics courses: See above, but note that students in IUG Statistics B.S. take STAT 501 and 502 instead of STAT 460 and 462.

IUG Statistics M.A.S. requirement (30 credits)

STAT 414 (3) Introduction to Probability Theory
 STAT 415 (3) Introduction to Mathematical Statistics
 STAT 501 (3) Regression Methods
 STAT 502 (3) Analysis of Variance and Design of Experiments
 STAT 580 (2) Statistical Consulting Practicum I
 STAT 581** (1) Statistical Consulting Practicum II
 Electives (15) Choose from STAT 503-510 and the departmental list of additional courses for the M.A.S. program with the approval of the adviser.

**For all students in the M.A.S. program, the STAT 581 course will have a comprehensive written project report required as part of the course, which serves as the culminating experience.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall 2017(STAT); Summer Session 2003 (Integrated B.S./M.A.S.)

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Blue Sheet Item #:46-03-063 (STAT); 31-01-123 (Integrated B.S./M.A.S.)

Review Date: 11/14/2017

UCA Revision #1: 9/1/06

UCA Revision #2: 7/30/07

SC

Strategic Communications

University Park, Donald P. Bellisario College of Communications (STRCM_BA)

PROFESSOR COLLEEN CONNOLLY-AHERN, Faculty Member in Charge

The Strategic Communications online degree, to be offered via the World Campus, explores the theories, methods, and tools used to structure persuasive messages. The major includes an overview of strategic communications principles and concepts that sets the stage for more advanced studies. Students learn about research and analytic techniques used to design and implement effective communication campaigns that are delivered via traditional and new media options. The use of digital technology and social media is emphasized. The program examines the dynamics of the political, legal, social, and cultural environments that interact to define a communication task or problem. Students also learn techniques to benchmark and evaluate the effectiveness of strategic communications programs and understand how they apply to internal and external constituencies. Students studying strategic communications will refine their critical thinking skills and explore the nature and source of the information message content, medium of delivery, and evaluation of the impact of the message on targeted groups. This program will be accredited by the Accrediting Council on Education in Journalism and Mass Communication.

For the Bachelor of Arts in Strategic Communications, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(10 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR EXPERIENCE:

(Included in Electives)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in Electives or General Education Requirements or Requirements for the Major)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

ELECTIVES: 29 credits

REQUIREMENTS FOR THE MAJOR: 35 credits [1]

This includes 10 credits of general education courses: 6 credits of GS courses, 4 credits of GQ courses.)

PRESCRIBED COURSES (29 credits)

COMM 160(1), COMM 230 WAC(3), COMM 428A(3), COMM 428B(3), COMM 428C(3), COMM 428D(3), COMM 428E(3), ECON 102 GS(3), PSYCH 100 GS(3), STAT 200 GQ(4) (Sem: 1-4)

ADDITIONAL COURSES (3 credits)

CC 401(3); CC 402(3); CC 403(3) (Sem: 1-8)

COMM 403(3); COMM 405(3); COMM 409(3); COMM 412(3); COMM 419 US;IL(3); COMM 495 (1-3)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits of COMM courses (other than COMM 100 or COMM 120) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-020

Review Date: 8/22/17

Surveying Engineering

University College, Penn State Wilkes-Barre (SUR E)

PROFESSOR FRANK DERBY, *Program Coordinator, Penn State Wilkes-Barre*

PROFESSOR IVAN E. ESPARRAGOZA, *Director of Engineering Technology and Commonwealth Engineering, Penn State Brandywine*

PROFESSOR SVEN BILÉN, *Head, School of Engineering Design, Technology, and Professional Programs, Penn State University Park*

The Surveying Engineering major provides a basic undergraduate education required for private and public service in the profession of surveying. Particular emphasis is placed on fundamental surveying principles required in all areas of surveying. Instruction is provided in the main divisions of surveying, including land surveying, mapping, photogrammetry, data analysis and adjustment, geodesy and map projection coordinate systems, remote sensing, geographic information systems, and land development. Students study various data collection techniques using surveying tools including total stations, levels, softcopy photogrammetry, satellite imagery, and the global navigation satellite system (GNSS). They also study legal principles related to land surveying, professional ethics, applications for Geographic Information Systems (GIS) in surveying, and data management techniques. Through the use of projects and capstone courses students will design measurement systems, alignments, land information systems, and land development.

Program Educational Objectives:

1. Proficiently use mathematics, science, measurement methods, and modern surveying tools to collect, analyze, and reduce spatial data in professional applications or advanced study in surveying engineering or a related field.
2. Proficiently apply basic principles of land surveying, professional practice, and professional ethics to design and conduct surveys, and to analyze and interpret data in surveying engineering applications.
3. Effectively convey technical and professional information in written, verbal, and graphic forms, as an individual and as a member of a professional team.
4. Demonstrate their recognition of the importance of professional organizations for advancement toward professional licensure, development of leadership skills, and maintaining a broad understanding of contemporary societal issues by participating in activities of professional organizations in capacities ultimately leading to leadership positions.
5. Demonstrate their recognition of the need for continuous, life-long learning by participating in continuing education as students or as instructors.

Program Outcomes (Student Outcomes):

The SUR E program has adopted for its program student outcomes the following outcomes as listed in the general criteria of the EAC of ABET "Criteria for Accrediting Engineering Programs, 2012-2013." Engineering programs must demonstrate that their students attain:

- a) an ability to apply knowledge of mathematics, science, and engineering,
- b) an ability to design and conduct experiments, as well as to analyze and interpret data,
- c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- d) an ability to function on multidisciplinary teams,
- e) an ability to identify, formulate, and solve engineering problems,
- f) an understanding of professional and ethical responsibility,
- g) an ability to communicate effectively,
- h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context,
- i) a recognition of the need for, and an ability to engage in life-long learning,
- j) a knowledge of contemporary issues
- k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

For the B. S. degree a minimum of 132 credits is required. The baccalaureate program in Surveying Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included as part of the First-Year Experience as specified by individual campus or college)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 114 credits

(This includes 27 credits of General Education courses: 9 credits of GWS courses; 6 credits of GQ courses; 9 credits of GN courses; 3 credits of GS courses.)

PRESCRIBED COURSES (93 credits)

EDSGN 100(3), MATH 140 GQ(4)[1], MATH 141 GQ(4)[1], MATH 220 GQ(2-3), PHYS 211 GN(4), SUR 111(4)[1], SUR 162(3)[1] (Sem: 1-2)
CMPSC 201 GQ(3), MATH 230(4), MATH 251(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2), STAT 401(3), SUR 212(4), SUR 222(3), SUR 241(3)[1], SUR 262(2) (Sem: 3-4)
IE 302(3), SUR 272(3)[1], SUR 341(3), SUR 351(3), SUR 362(3), SUR 372(3)[1], SUR 381(4) (Sem: 5-6)
SUR 441(3), SUR 455(3), SUR 462(3), SUR 471(3), SUR 490(1) (Sem: 7-8)

ADDITIONAL COURSES (15 credits)

CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 1-2)
ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)
ECON 102 GS(3), ECON 104 GS(3), or ECON 14 GS(3) (Sem: 3-6)
ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 5-6)
CE 410(3) or SUR 482(3) (Sem: 7-10)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from C E 300-level courses [2], CE 400-level courses[2], SUR 313(3), SUR 422(3), SUR 496(1-6) or SUR 497(1-6) (Sem: 7-10)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[2] These courses are not offered at Wilkes-Barre campus. They are provided to accommodate concurrent degree students in CE and SURE.

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-06-069

Review Date: 04/12/2011

UCA Revision #1: 8/14/06

UCA Revision #2: 7/30/07

EN

Telecommunications

University Park, Donald P. Bellisario College of Communications (TELCM)

PROFESSOR MATTHEW JACKSON, Head, Department of Telecommunications

The Telecommunications program seeks to prepare informed, responsible professionals for leadership roles in the electronic communication and information industries. The program stresses the social, cultural and economic impact of electronic media, including radio, television, videogames, telephones and the Internet.

Students can choose an emphasis in programming and production, management and entrepreneurship, law and policy.

Graduates go on to careers at local radio and television stations; broadcast, cable and satellite networks; Internet content and service providers; wired and wireless telephone companies; and other related media and entertainment industries. The major emphasizes the business and legal parameters of telecommunications, making it an excellent preparation for law school or graduate school and careers in government policy and the entertainment field.

Students must select at least 72 credits in courses outside the Bellisario College of Communications.

For the B.A. degree in Telecommunications, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(3-4 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 19 -20 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 34-35 credits^[1]

(This includes 3-4 credits of General Education GS courses.)

PRESCRIBED COURSES (10 credits)

COMM 160(1) (Sem: 1-4)
COMM 180 GS(3) (Sem: 3-4)
COMM 280(3), COMM 380(3) (Sem: 5-6)

ADDITIONAL COURSES (21-22 credits)

Select 3-4 credits from: ECON 102 GS(3), ECON 14 GS(3), SCM 200 GQ(4), STAT 200 GQ(4) (Sem: 3-4)

Students must meet with a faculty advisor to approve their course selections from the following areas:

Select 12 credits from: COMM 190/GAME 140 GS(3), COMM 282(3) or COMM 242(3); COMM 283(3), COMM 310(3), COMM 374(3), COMM 383(1-3), COMM 383A(3), COMM 384(3), COMM 385(3), COMM 386(3), COMM 403H(3), COMM 410 IL(3), COMM 419 US;IL(3), COMM 419H US;IL(3), COMM 479(3), COMM 483(3), COMM 484(3), COMM 484A(3), COMM 485(3), COMM 490(3), COMM 491(3), COMM 493(3), COMM 495(3) (Sem: 5-8)

Take 3 credits in law: COMM 403(3), COMM 404(3), or COMM 492(3)

Take 3 credits in capstone courses: COMM 486(3), COMM 487(3), or COMM 489(3)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits in social aspects of communication from COMM 110 GH(3), COMM 118 GS(3), COMM 205 US(3), COMM 304(3), COMM 403(3), COMM 405(3), COMM 409(3), COMM 410 IL(3), COMM 411(3), COMM 412(3), COMM 413W(3), COMM 417(3), COMM 418(3), COMM 419 US;IL(3), COMM 496(1-3) (Sem: 5-8)

****Students must take at least 9 credits of 400-level courses from the additional or supporting course lists.**

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

CM

Publications: 2/16/05

Theatre

*Berks College (THABL)
University Park, College of Arts and Architecture (THRBA)*

PROFESSOR RADHICA GANAPATHY, *Penn State Berks*
PROFESSOR ELISHA CLARK HALPIN, *Penn State University Park*

This program offers the theatre student a general background in the various facets of theatre. A broad liberal education is provided and complemented with advanced courses to best serve student interests, talents, and career objectives. Though a strong emphasis is given to the areas of production and performance, majors may also wish to emphasize an area of special interest such as literature, design, dance, playwriting, directing or acting. All B.A. students spend a semester in study abroad studying at the Theatre Academy of London (TAL), a program that balances academic courses with advance studio work.

Students who pursue the B.A. in Theatre learn to research, analyze and synthesize information. Majors develop strong oral and written skills and many go on to postgraduate study not only in theatre but also in areas such as law, business and education.

The B.A. in Theatre degree program includes a Theatre Studies Option and three additional options, Theatre Performance, Dance Performance and Multicultural Performance. Entrance criteria to this major will include an interview with members of the Theatre faculty. Entrance to the three performance options will also include an audition or portfolio review. All four options are available at University Park; the Theatre Studies and Theatre Performance options only are available at Penn State Berks.

For the B.A. degree in Theatre, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(1.5-7.5 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 10-11 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits
(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 44.5-51.5 credits [\[1\]](#)
(This includes 1.5-7.5 credits in General Education courses; 1.5 credits GHA courses; 0-6 credits of GH courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 29.5-30.5 credits

PRESCRIBED COURSES (6.5 credits)
DANCE 170 GHA(1.5), THEA 289(1) (Sem: 1-2)
THEA 1S(1) (Sem: 1-4)
THEA 401 IL(3) (Sem: 3-6)

ADDITIONAL COURSES (11-12 credits)
Select 3 credits from THEA 102 GA(3) or THEA 120(3) (Sem: 1)
Select 2-3 credits from THEA 107 GA(3) or THEA 200(2) (Sem: 1-2)
Select 3 credits from THEA 100 GA;US;IL(3) or THEA 105 GA(3) (Sem: 1-2)
Select 3 credits from THEA 130(3) or THEA 131(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 12 credits THEA 499 or DANCE 499 (Sem: 6-8)

REQUIREMENTS FOR THE OPTION: 15-21 credits

THEATRE STUDIES OPTION: (15 credits) [\[1\]](#)

PRESCRIBED COURSES (9 credits) [\[1\]](#)
THEA 150(3) (Sem: 1-4)
THEA 402(3), THEA 434(3) (Sem: 5-8)

ADDITIONAL COURSES (6 credits) [\[1\]](#)
Select 6 credits from THEA 405 US(3), THEA 407W US(3), THEA 408W US(3), THEA 412 US;IL(3), or THEA 464(3) (Sem: 5-8)

THEATRE PERFORMANCE OPTION (21 credits) [\[1\]](#)

PRESCRIBED COURSES (9 credits)
THEA 150(3) (Sem: 1-2)
THEA 402(3), THEA 434(3) (Sem: 3-6)

ADDITIONAL COURSES (12 credits):
Select 3 credits from THEA 121(3) or THEA 289(3) (Sem: 1-4)
Select 3 credits from THEA 405 US(3), THEA 407W US(3), THEA 408W US(3), THEA 412 US;IL(3), THEA 464(3) (Sem: 5-8)
Select 6 credits (with permission of adviser/instructor) from:
THEA 220(3), THEA 221(3), THEA 322(2), THEA 324(2) (Sem: 3-8)
OR
THEA 410(3), THEA 436(3), THEA 437(1-6) (Sem: 5-8)
OR
THEA 440(3-6) (Sem: 5-8)
OR
THEA 250(3), THEA 251(2), THEA 252(1), THEA 260(3), THEA 270(3) (Sem: 3-8)

DANCE PERFORMANCE OPTION: (18 credits)

PRESCRIBED COURSES (3 credits) [\[1\]](#)
DANCE 410 US;IL(3) (Sem: 5-6)

ADDITIONAL COURSES (15 credits) [\[1\]](#)
Select 9 credits from DANCE 361(1.5), DANCE 362(1.5), DANCE 461(1.5), DANCE 462(1.5) (Sem: 1-7)
Select 6 credits from THEA 146(2), THEA 402(3), THEA 405(3), THEA 407W(3), THEA 408W(3), THEA 412(3), THEA 440(3), DANCE 411(3) (Sem: 2-8)

MULTICULTURAL PERFORMANCE OPTION (21 credits)

PRESCRIBED COURSES (9 credits) [\[1\]](#)

DANCE 411 GH(3), THEA 412 US;IL(3), THEA 495(3) (Sem: 4-8)

ADDITIONAL COURSES (9 credits)

Select 3 credits from CMLIT 10 GH;IL(3), CMLIT 12 GH;IL(3), CMLIT 101 GH;US;IL(3) (Sem: 3-6)

Select 6 credits from CAS 271 US;IL(3), CMLIT 13 GH;IL(3), CMLIT 140 GH;IL(3), CMLIT 189 GH;IL(3), CMLIT 422 IL(3), CMLIT 435 IL(3), CMLIT 438 IL(3), CMLIT 453 IL(3), CMLIT 455 IL(3), CMLIT 486 IL(3), CMLIT 487 IL(3), CMLIT 488 IL(3), CMLIT 491 IL(3), DANCE 221(1.5), DANCE 320(1.5), ENGL 135 GH;US(3), ENGL 226 GH;US;IL(3), ENGL 235 US(3), ENGL 245 GH;US(3), ENGL 426 US(3), ENGL 431 US(3), INART 5 GA(3), INART 62 GA;US;IL(3), MUSIC 7 GA;US(3), MUSIC 9(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits in consultation with adviser (Sem 5-8)

[\[1\]](#)A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-04-001

Review Date: 01/14/2014

AA

Theatre

University Park, College of Arts and Architecture (THRFA)

PROFESSOR WILLIAM KENYON, B.F.A. Program Coordinator, Design and Technology Option
PROFESSOR TRAVIS DeCASTRO, B.F.A. Program Coordinator, Stage Management Option

Not all options are available at every campus. Contact the campus you are interested in attending to determine which options are offered.

The Bachelor of Fine Arts in Theatre offers two options: Design and Technology, and Stage Management.

The B.F.A. degree in Theatre with the Design and Technology option is intended to develop a level of competence that will enable students who wish to pursue professional careers in theatre design, theatre technology and related entertainment fields to prepare themselves for specialized graduate studies, specialized professional training and/or immediate participation in creative work. The prescribed core curriculum introduces students to each of the theatre design areas and provides them with a basic skill level in technology. The curriculum also features acting, directing, script analysis, theatre history and criticism. Students choose an emphasis area after their third semester to focus their awareness, their capabilities and their critical faculties or abilities in their area of interest.

For the B.F.A. degree in Theatre with the Stage Management option is intended to provide students with specialized training leading to a high level of competence in the stage management field. Graduates should be able to begin professional work or pursue further training at the graduate level. The Stage Management option is intended to educate students for a career in stage management for theatre.

Acceptance into the Design and Technology option is based on a faculty interview and portfolio review. Acceptance into the Stage Management option is based on a faculty interview and production book review. Both options require a minimum of 120 credits.

GENERAL EDUCATION: 45 credits
(0-6 credits included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 3-11 credits

REQUIREMENTS FOR THE MAJOR: 70-78 credits
(This includes 0-6 credits of General Education courses: Sound Design emphasis--3 credits of GN courses and 3 credits of GA courses. Scene Design emphasis--3 credits of GA courses)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 42 credits

PRESCRIBED COURSES (42 credits)^[1]
THEA 100 GA;US;IL(3), THEA 1S(1), THEA 120(3), THEA 130(3), THEA 131(3), THEA 150(3), THEA 200(2) (Sem: 1-2)
THEA 250(3), THEA 251(2), THEA 260(3), THEA 270(3), THEA 280(3), THEA 285(3), THEA 289(1) (Sem: 3-6)
THEA 401(3), THEA 481(3) (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 28-36 credits

DESIGN AND TECHNOLOGY OPTION: (33-36 credits)

PRESCRIBED COURSES (9 credits)^[1]
THEA 252(1) (Sem: 3-6)
THEA 434(3), THEA 454(3), THEA 459(2) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)^[1]
Select 6 credits from THEA 456(1), THEA 457(1), THEA 466(1), THEA 467(1), THEA 477(1), THEA 487(1), THEA 489(1) (Sem: 3-8)
Select 3 credits from THEA 464(3) or THEA 465(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (15-18 credits)^[1]
Select 15-18 credits from one of the following emphases a, b, c, d, or e
a. Costume Design/Technology: THEA 146(2), THEA 253(1), THEA 261(3), THEA 460(3-6), THEA 461(3-6), THEA 464(3), or THEA 465(3) (Sem: 3-8)
b. Scene Design: THEA 253(1), THEA 450(6), THEA 453(2) (Sem: 3-8)
Select 3 credits from: THEA 460(3), THEA 470(3), THEA 480(3) (Sem: 6-8)
Select 3 credits from: ARTH 111 GA(3), ARTH 112 GA(3), THEA 451(1), THEA 458(1), THEA 460(3), THEA 470(3), THEA 480(3), THEA 485(3-6) (Sem: 3-8)
c. Lighting Design: THEA 253(1), THEA 482(3), THEA 485(3-6), THEA 470(6), THEA 472(2) (Sem: 3-8)
d. Sound Design: INART 50 GN(3), INART 258A GA(3), THEA 482(3), THEA 484(3), THEA 485(3-6) (Sem: 3-8)
e. Scenic Technology: THEA 253(1), THEA 482(3), THEA 470(3), THEA 480(6), THEA 485(3-6) (Sem: 3-8)

STAGE MANAGEMENT OPTION: (28 credits)

PRESCRIBED COURSES (25 credits)^[1]
THEA 146(2) (Sem: 1-2)
THEA 220(3), THEA 289(1), THEA 322(2), THEA 324(2) (Sem: 3-4)
THEA 486(9) (Sem: 5-8)
THEA 496(6) (Sem: 6-8)

ADDITIONAL COURSES (3 credits)^[1]
Select 3 credits from: THEA 405(3), THEA 407W US(3), THEA 408W(3), THEA 412 US(3), THEA 464(3), THEA 465(3) (Sem: 4-8)

^[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

^[5] Students may apply 6 credits of ROTC.

Last Revised by the Department: Fall Semester 2005

Blue Sheet Item #: 33-04-017

Review Date: 1/18/05

AA

Musical Theatre

University Park, College of Arts and Architecture (THRMT)

PROFESSOR JOHN SIMPKINS, *in charge*, Musical Theatre

The major is intended to provide students with specialized training leading to a high level of competence in musical theatre. Graduates should be able to begin professional work or pursue further training at the graduate level. This major is intended for those students who wish to pursue a career as a musical theatre professional. Acceptance into the major is based on an evaluative audition.

For the B.F.A. degree in Musical theatre, a minimum of 125 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(6 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 86 credits

(This includes 6 credits of General Education GA courses)

PRESCRIBED COURSES (81 credits)

Theatre courses (30 credits) [\[1\]](#)

THEA 001S(1), THEA 100 GA;US;IL(3), THEA 115(2), THEA 225A(2), THEA 225B(2), THEA 225C(2)(Sem: 1-2)

THEA 132(3) (Sem: 2-4)

THEA 150(3)(Sem: 2-4)

THEA 289(1), THEA 425A(2), THEA 425C(2), THEA 427A(2), THEA 427C(2) (Sem: 3-4)

THEA 401 IL(3)(Sem: 5-8)

Music courses (23 credits) [\[1\]](#)

THEA 113(3), THEA 116(2) (Sem: 1-2)

THEA 212(3), THEA 214(3), VOICE 110 GA(4) (Sem: 3-4)

VOICE 110 GA(4) (Sem: 5-6)

VOICE 412(2), VOICE 462(2) (Sem: 7-8)

Dance courses (12 credits) [\[1\]](#)

DANCE 231(1.5), DANCE 232(1.5) (Sem: 1-2)

DANCE 241(1.5), DANCE 242(1.5) (Sem: 3-4)

DANCE 251(1.5), DANCE 252(1.5), DANCE 382(1.5), DANCE 384(1.5) (Sem: 5-6)

Musical Theatre courses (16 credits) [\[1\]](#)

MUSIC 113(1), MUSIC 114(1), THEA 114(3)(Sem: 1-2)

THEA 223(2), THEA 224(2) (Sem: 3-4)

THEA 408W US(3)(Sem: 5-6)

THEA 423(2), THEA 424(2)(Sem: 7-8)

ADDITIONAL COURSES (5 credits)

Select 2 credits from MUSIC 085 GA(1), MUSIC 089 GA(1), MUSIC 090 GA(1), MUSIC 091 GA(1), MUSIC 092 GA(1), MUSIC 093 GA;US;IL(1), MUSIC 094 GA(1), MUSIC 103 GA(1), MUSIC 104 GA(1), MUSIC 467(1), THEA 326(1 per semester, maximum of 3), THEA 428(2) (Sem: 3-6)

Select 3 credits, one from each of the following groups:

a. DANCE 431(1.5), DANCE 441(1.5), DANCE 451(1.5) (Sem: 7-8)

b. DANCE 432(1.5), DANCE 442(1.5), DANCE 452(1.5) (Sem: 7-8)

(Students may apply 6 credits of ROTC)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-05-008A

Review Date: 2/23/16

AA

Toxicology

University Park, College of Agricultural Sciences (TOX)

PROFESSOR JOHN VANDEN HEUVEL, Program Coordinator

Toxicology addresses adverse effects of chemicals on animals and humans and includes exposure assessment, hazard identification, dose-response analysis, and risk characterization. This discipline relies on cutting-edge biotechnological approaches to gain insight into drug and toxicant action at the molecular level. Students enrolled in the Toxicology program will develop an understanding of the principles by which chemicals affect the health of humans and animals either adversely, as toxic agents, or beneficially, as therapeutic agents. Students will learn about: 1) mechanisms of action of drugs and toxicants on organ systems of the body; 2) general principles for assessing the safety of chemicals and therapeutic efficacy of drugs; and 3) state-of-the-art molecular, biological, and genetic approaches to understanding drugs, toxicants, and disease through a combination of laboratory and lecture experiences. The B.S. degree in Toxicology provides a strong foundation for graduate work leading to a Ph.D. in most biomedical fields. Students may choose to pursue a Ph.D. degree in Pharmacology, Toxicology, Biochemistry, Physiology, Pathobiology, Oncology, or Molecular Biology. Alternatively, students prepare for employment as research technicians, drug/toxicant specialists, or pharmaceutical sales representatives.

Entrance to Major Requirements:

In order to be eligible for entrance to the Toxicology major, a student must have (1) attained at least a 2.00 cumulative grade point average and (2) earned a C grade or better in: BIOL 110, BIOL 230W, CHEM 110, CHEM 111, CHEM 112, CHEM 113, MATH 140 and MATH 141.

For the B.S. degree in Toxicology, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(15 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-2 credits

REQUIREMENTS FOR THE MAJOR: 92-94 credits

(This includes 15 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses.)

PRESCRIBED COURSES (78 credits)

BIOL 110 GN(4)[\[1\]](#), CHEM 110 GN(3)[\[1\]](#), CHEM 111 GN(1)[\[1\]](#), CHEM 112 GN(3)[\[1\]](#), CHEM 113 GN(1)[\[1\]](#), MATH 140 GQ(4)[\[1\]](#), MATH 141 GQ(4)[\[1\]](#) (Sem: 1-2)

BBH/HPA 440 US:IL(3), CHEM 210(3), CHEM 212(3), CHEM 213(2), VBSC 230(3) (Sem: 3-4)

PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 3-6)

BIOL 220W GN(4), BIOL 230W GN(4), BIOL 240W GN(4) (Sem: 3-6)

BMB 211(3), BMB 212(1), BMB 221(2), BIOL 472(3)[\[1\]](#), VBSC 330(3)[\[1\]](#) (Sem: 5-6)

ERM 431(3)[\[1\]](#), VBSC 438(3)[\[1\]](#), VBSC 433(3)[\[1\]](#), VBSC 451(3)[\[1\]](#) (Sem 7-8)

ADDITIONAL COURSES (5-7 credits)

Select 3-4 credits from STAT 200 GQ(4) or STAT 250 GQ(3) (Sem: 3-4)

Select 2-3 credits from VBSC 395(1-10) or VBSC 496(1-18) (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits of 400-level courses from department list [\[1\]](#) (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-02-002

Review Date: 10/02/2012

UCA Revision #1: 8/14/06

AG

Program Coordinator updated: 6/19/12

Turfgrass Science

University Park, College of Agricultural Sciences (TURF)
World Campus

PROFESSOR ANDREW McNITT, Program Coordinator

This major provides an integrated program of study that includes basic and applied sciences, business management courses and an internship to prepare students for careers in turfgrass management and related areas. By carefully selecting supporting courses and electives, students can adapt the program to meet a variety of professional interests and educational needs.

Employment opportunities include golf course maintenance, professional lawn care, grounds maintenance, sod production, sales and service, athletic field maintenance, and research technician.

With appropriate selection of science courses, students can prepare for graduate study leading to careers in teaching, research, and extension.

Entrance Requirement: A student wishing to transfer into the Turfgrass Science program must have completed CHEM 101 GN(3) or CHEM 110 GN(3) and received a grade of C or better in each course prior to declaring the major.

For the B.S. degree in Turfgrass Science, a minimum of 120 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in SUPPORTING COURSES AND RELATED AREAS course selections)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selections)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 4 credits

REQUIREMENTS FOR THE MAJOR: 89 credits

(This includes 18 credits of General Education courses; 3 credits of GWS courses; 6 credits of GQ courses; 9 credits of GN courses.)

PRESCRIBED COURSES (49 credits)

BIOL 127 GN(3), CHEM 202(3) [\[1\]](#), CMPSC 203 GQ(4), MATH 21 GQ(3) (Sem: 1-4)
SOILS 101 GN(3) [\[1\]](#), TURF 230(1) [\[1\]](#), TURF 235(3) [\[1\]](#), TURF 495(3) [\[1\]](#) (Sem: 3-4)
ENT 317(3) [\[1\]](#), PPEN 412(3) [\[1\]](#), TURF 238(3) [\[1\]](#), TURF 434(3) [\[1\]](#) (Sem: 5-6)
TURF 307(3), TURF 425(3) [\[1\]](#), TURF 435(4) [\[1\]](#), TURF 436(3) [\[1\]](#), TURF 490(1) [\[1\]](#) (Sem: 6-8)

ADDITIONAL COURSES (13 credits)

BIOL 11 GN(3), BIOL 12 GN(1); or BIOL 110 GN(4) (Sem: 1-4)
CHEM 101 GN(3) [\[1\]](#) or CHEM 110 GN(3) [\[1\]](#) (Sem: 1-4)
METEO 3 GN(3) or METEO 101 GN(3) (Sem: 1-4)
ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (27 credits)

Select 12 credits from department professional agriculture list (Sem: 1-8)

Select 15 credits from department professional management and economics list (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-02-003

Review Date: 10/02/2012

UCA Revision #1: 8/14/06

[Comments](#)

AG

Visual Art Studies

Altoona College (VAST)

The Bachelor of Arts degree in Visual Art Studies offers students the opportunity to explore studio work in Art within the context of a broader liberal arts education. Students can learn fundamental techniques and concepts common to the Visual Arts. Emphasis is also put on creative problem solving through advanced investigations of artistic themes and issues. Course work includes requirements (classes) related to the portfolio preparation necessary for employment in creative fields or for education at the graduate level.

Entry into the Visual Art Studies major requires a third semester standing (27.1 credits), the completion of 6 credits in ART with a C or better, an entrance interview, and a 2.00 or higher cumulative grade-point average. The entrance interview will be based on a review of the student's work in the 6 credits of ART, and any other work the student wishes to include.

For the B.A. degree in Visual Art Studies, a minimum of 121 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits

(6 of these credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 7-13 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)
(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 45 credits [\[1\]](#)

(This includes 6 credits of General Education courses: 6 credits of GA courses.)

PRESCRIBED COURSES (42 credits)

ARTH 111 GA;IL(3), ARTH 112 GA;IL(3) (Sem: 1-2)

ART 165 GA(3), ART 166 GA(3), ART 168 GA(3), ART 265(3), ART 266(3), ART 269(3) (Sem: 1-4)

ART 468(3) (Sem: 4-8)

ART 365(3), ART 366(3), ART 465(3), ART 466(3), ART 469(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)

Select 3 credits of 400-level ART H courses (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2007

Blue Sheet Item #: 35-03-101

Review Date: 1/31/08

AA

Veterinary and Biomedical Sciences

University Park, College of Agricultural Sciences (VBSC)

PROFESSOR LESTER C. GRIEL Jr., Program Coordinator

This major provides a strong background in those biological and physical sciences underlying contemporary veterinary science and establishes a sound foundation for graduate-level study in veterinary and related biomedical disciplines. The student has the option to focus their area of study by selecting supporting courses in a variety of areas.

The mission of the Veterinary and Biomedical Sciences major is to prepare students for admission to veterinary school and/or entry into graduate programs or employment in veterinary and biomedical research and development. Students may prepare for graduate programs in disciplines such as genetics, nutrition, microbiology, animal sciences, physiology, biochemistry, or others.

In order to be eligible for entrance to the Veterinary and Biomedical Sciences major a student must have: (1) attained a cumulative grade point average of at least a 2.0 and (2) completed BIOL 110 GN(4), CHEM 110 GN(3), CHEM 111 GN(1) and earned a grade of C or better in each of these courses.

For the B.S. degree in Veterinary and Biomedical Sciences, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(18 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 7-10 credits

REQUIREMENTS FOR THE MAJOR: 87-90 credits

(This includes 18 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses.)

PRESCRIBED COURSES (53 credits)

BIOL 110 GN(4) [\[1\]](#), CHEM 110 GN(3) [\[1\]](#), CHEM 111 GN(1) [\[1\]](#), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-4)

ANSC 201(4) [\[1\]](#), PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 3-4)

ANSC 301(3) [\[1\]](#), BIOL 222(3) [\[1\]](#), MICRB 201(3), MICRB 202(2) (Sem: 5-6)

VBSC 211 GN(3), VBSC 403(3) [\[1\]](#), VBSC 421(4) (Sem: 4-8)

ADDITIONAL COURSES (25-28 credits)

Select 3 credits from AGBM 101 GS(3), ECON 102 GS(3), or ECON 104 GS(3) (Sem: 1-3)

Select 4 credits from BMB 251(3), BIOL 220W GN(4), BIOL 230W GN(4), BIOL 240W GN(4) (Sem: 3-4)

Select 6-8 credits from CHEM 202(3), CHEM 203(3); or CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 3-4)

Select 3 credits from ANSC 423(3) or BIOL 472(3) (Sem: 5-6)

Select 3-4 credits from STAT 200 GQ(4) or STAT 250 GQ(3) (Sem: 5-6)

Select 6 credits from BMB 211(3), BMB 212(1), BMB 221(2); or BMB 401(3), BMB 402(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits) [\[1\]](#)

Select 9 credits of 400-level courses from department list (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-008

Review Date: 04/08/2014

UCA Revision #1: 8/2/06

AG

Wildlife and Fisheries Science

University Park, College of Agricultural Sciences (W F S)

PROFESSOR ELLEN MANNO, Program Coordinator

The purpose of the Wildlife and Fisheries Science major is to develop the knowledge, skills, and professional ethics of undergraduates interested in the conservation and management of fish and wildlife and their environments. The curriculum is designed to provide a broad-based science background that incorporates natural resource management principles that prepare our students for a diverse array of opportunities such as graduate school, natural resource management agencies, consulting firms, non-profits, etc. Students can choose from two options: Wildlife option and Fisheries option. Each option enables students to gain greater depth of knowledge in one area of the discipline. Coursework required for the Wildlife option meets The Wildlife Society's requirements for professional certification, and coursework required for the Fisheries option meets the American Fisheries Society's requirements for professional certification.

For the B.S. in Wildlife and Fisheries Science, a minimum of 120 credits is required for the Wildlife option and a minimum of 122 credits is required for the Fisheries option.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(21 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 3-9 credits

REQUIREMENTS FOR THE MAJOR: 87-95 credits

(This includes 21 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 3 credits of GWS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 69-72 credits

PRESCRIBED COURSES (45 credits)

BIOL 110 GN(4), BIOL 220W GN(4) [\[1\]](#), CHEM 110 GN(3), CHEM 111 GN(1) (Sem: 1-4)
BIOL 240W GN(4), CHEM 202(3), PHYS 250 GN(4), SOILS 101 GN(3), WFS 209 GN(3) [\[1\]](#) (Sem: 3-4)
ECON 104 GS(3), WFS 300(2) [\[1\]](#), WFS 301(2) [\[1\]](#), WFS 310(3) [\[1\]](#) (Sem: 5-6)
WFS 446(3), ENGL 202C GWS(3) (Sem: 7-8)

ADDITIONAL COURSES (18-21 credits)

MATH 110 GQ(4) [\[1\]](#) or MATH 140 GQ(4) [\[1\]](#); MATH 111 GQ(2) or MATH 141 GQ(4) (Sem: 1-2)
ANSC 322(3), BIOL 133 GN(3), BIOL 222(3), or BIOL 230W GN(4) (Sem: 3-4)
STAT 240 GQ(3) or STAT 301 GQ(3) (Sem: 3-4)
FOR 350(3) or STAT 460(3) (Sem: 5-6)
AEE 440(3), ENGL 416(3), or ENGL 418(3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in natural resource economics, policy, planning, law, administration, or human dimensions from departmental list (Sem: 5-8)

REQUIREMENTS FOR THE OPTION: 18-23 credits

FISHERIES OPTION: (22-23 credits)

PRESCRIBED COURSES (10 credits)

WFS 452(2), WFS 453(2) (Sem: 5-6)
WFS 410(3), WFS 463(3) (Sem: 5-8)

ADDITIONAL COURSES (12-13 credits)

BIOL 141 GN(3), BIOL 142(1); or BIOL 446(3), or ANSC 201(4) (Sem: 5-6)
WFS 407(3), WFS 408(3), or WFS 447(3) (Sem: 5-8)
ENT 425(3), FOR 470(3), WFS 422(3); WFS 435(3)/ERM 435(3) (Sem: 5-8)
GEOG 160 GS(3), GEOG 363(3), GEOSC 303(3), GEOSC 340(3), GEOSC 412(3), GEOSC 440(3), or GEOSC 452(3) (Sem: 7-8)

WILDLIFE OPTION: (18-19 credits)

PRESCRIBED COURSES (12 credits)

FOR 203(3) (Sem: 3-4)
WFS 407(3), W F S 408(3) (Sem: 5-6)
WFS 447(3) (Sem: 7-8)

ADDITIONAL COURSES (6-7 credits)

WFS 406(2) or WFS 409(2) (Sem: 5-6)
WFS 410(3), WFS 422(3), WFS 452(2), WFS 453(2), or WFS 463(3) (Sem: 5-8)
BIOL 414(3), FOR 308(3), HORT 101 GN(3), HORT 138(3), or HORT 445(3) (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2008

Blue Sheet Item #: 36-04-004

Review Date: 1/15/08

UCA Revision #1: 8/14/06

AG

Workforce Education and Development

University Park, College of Education (WF ED)

PROFESSOR MARK THREETON, *Undergraduate Coordinator*

This major leads to the B.S. degree and may also lead to certification as a career and technical education teacher, and/or a coordinator of cooperative education, provided other requirements of the Pennsylvania Department of Education are met. The Industrial Training option does not lead to teacher certification.

To be certified by the Pennsylvania Department of Education as a career and technical education teacher, a person must have sufficient employment experience beyond the learning period to establish competency in the occupation to be taught. Further interpretation of this requirement may be secured by contacting the Department of Learning and Performance Systems. (See also [Teacher Education Programs](#).)

Baccalaureate degree candidates must meet the following requirements by the end of their fourth semester to be admitted to the Workforce Education (WF ED) major:

1. Complete ECON 102 GS(3) or ECON 104 GS(3); EDPSY 14(3), EDTHP 115(3), ENGL 15 GWS(3) or ENGL 30 GWS(3), WFED 101(1)
2. Complete 3 credits in literature (GH)
3. Complete 6 credits in Quantification (GQ)
4. Minimum 3.00 cumulative GPA
5. Meet PRAXIS PPST-READING current qualifying scores
6. Meet PRAXIS PPST-WRITING current qualifying scores
7. Meet PRAXIS PPST-MATHEMATICS current qualifying scores
8. Complete and document a minimum of 80 hours of experience

For the B.S. degree in Workforce Education and Development, a minimum of 124 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits
(3 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:
(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 0-1 credits

REQUIREMENTS FOR THE MAJOR: 81-82 credits
(This includes 3 credits of General Education GS courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 38 credits [\[18\]](#)

PRESCRIBED COURSES (35 credits)
ECON 102 GS(3) or ECON 104 GS(3); EDPSY 14(3), EDTHP 115(3), WFED 1(3), WFED 101(1), WFED 105(3), WFED 323(3) (Sem: 3-6)
WFED 445(3) (Sem: 3-8)
WFED 106(3), WFED 207(3), WFED 413(3), WFED 441(2) (Sem: 5-8)
WFED 442(2) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)
WFED 450 US;IL(3), LDT 100 GS;IL(3), or STS 245 GS;IL(3) (Sem: 3-6)

REQUIREMENTS FOR THE OPTION: 43-44 credits

HEALTH OCCUPATIONS EDUCATION OPTION: (43 credits) [\[18\]](#)

PRESCRIBED COURSES (34 credits)
WFED 395C(24) (Sem: 5-8)
WFED 495C(10) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 9 credits in course work related to the student's field of study (Sem: 3-8)
(Students may apply 6 credits of ROTC.)

INDUSTRIAL EDUCATION OPTION: (43 credits) [\[18\]](#)

PRESCRIBED COURSES (34 credits)
WFED 395A(24) (Sem: 5-8)
WFED 495C(10) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 9 credits of course work related to the student's field of study (Sem: 3-8)
(Students may apply 6 credits of ROTC.)

INDUSTRIAL TRAINING OPTION: (44 credits) [\[18\]](#)

PRESCRIBED COURSES (35 credits)
WFED 270(3) (Sem: 3-6)
WFED 471(3) (Sem: 5-6)
WFED 395D(24) (Sem: 5-8)
WFED 495D(5) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 9 credits in course work related to the student's field of study (Sem: 3-8)
(Students may apply 6 credits of ROTC.)

OCCUPATIONAL HOME ECONOMICS EDUCATION OPTION: (43 credits) [\[18\]](#)

PRESCRIBED COURSES (34 credits)
WFED 395B(24) (Sem: 5-8)
WFED 495C(10) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 9 credits in course work related to the student's field of study (Sem: 3-8)

[18] A grade of C or better per course is required for teacher certification.

Last Revised by the Department: Summer Session 2009

Blue Sheet Item #: 37-04-013

Review Date: 1/13/09

ED

World Languages (K-12) Education

University Park, College of Education (WL ED)

PROFESSOR MATTHEW POEHNER, Undergraduate Coordinator

The World Languages Education major helps prepare students for kindergarten through high school teaching positions and for other employment in fields related to their content language areas.

The following teaching options are available for majors in World Languages Education: Bilingual Education, English as a Second Language, French, German, Latin, Russian, and Spanish. Pennsylvania does not issue a teacher certificate in Bilingual Education; many other states do. Completers of the English as a Second Language (ESL) option may qualify for the Pennsylvania Program Specialist: ESL credential if they hold a Pennsylvania teacher certificate.

BILINGUAL EDUCATION TEACHING OPTION: Although Pennsylvania does not issue a teacher certificate in Bilingual Education, other states do. Thus, completion of this option as well as any tests or requirements stipulated by the pertinent state department of education (other than Pennsylvania) should lead to a teacher certificate in Bilingual Education. In addition to the Common Requirements of the World Languages Education major, candidates select one of the language emphases, i.e., French, German, Latin, Russian, or Spanish, complete the courses associated with that emphasis and also the Common Requirements for all Emphases. Consequently, candidates also become eligible for teacher certification in the language selected as their language emphasis. Further, completers of this B.S. degree and option may also become eligible for the English as a Second Language (ESL) credential by completing six additional credits, i.e., APLNG 410 or APLNG 484, and APLNG 493.

Candidates are expected to have taken their choice of language coursework beyond the intermediate level to be eligible for enrollment in FR 201, or GER 201, or RUS 204, or SPAN 200. In general, students are encouraged to take at least one course in the chosen language each semester without interruption. Participation in an approved Education Abroad Study Program is required, typically during semester six.

ENGLISH AS A SECOND LANGUAGE (ESL) TEACHING OPTION: This option will lead to a baccalaureate degree only in conjunction with one of the other companion World Language Education Teaching options.

The ESL Teaching option is a joint offering of the Department of Curriculum and Instruction in the College of Education and the Department of Linguistics and Applied Language Studies in the College of the Liberal Arts. Dr. Youb Kim, Assistant Professor of Education and Applied Linguistics, and Joan Kelly Hall, Professor of Linguistics and Applied Linguistics, are co-directors of the program.

This option prepares candidates for advanced work in ESL and for the Pennsylvania teacher credential Program Specialist: English as a Second Language (ESL). However, the Pennsylvania Department of Education only issues the Program Specialist: ESL credential to holders of Pennsylvania Instructional I or II certificates. Thus, completers of another World Languages Education Teaching option may first seek the Pennsylvania Instructional certificate in that language and may then add the Program Specialist: ESL credential, subsequently.

FRENCH TEACHING OPTION: Completion of this option and pertinent tests required by the Pennsylvania Department of Education lead to the Pennsylvania Instructional I teacher certificate in French. Candidates are expected to have taken French coursework beyond the intermediate level to be eligible for enrollment in FR 201. In general, students are encouraged to take at least one course in French each semester without interruption. Participation in an approved Education Abroad Study Program is required, typically during semester six.

GERMAN TEACHING OPTION: Completion of this option and pertinent tests required by the Pennsylvania Department of Education lead to the Pennsylvania Instructional I teacher certificate in German. Candidates are expected to have taken German coursework beyond the intermediate level to be eligible for enrollment in GER 201. In general, students are encouraged to take at least one course in German each semester without interruption. Participation in an approved Education Abroad Study Program is required, typically during semester six.

LATIN TEACHING OPTION: Completion of this option and pertinent tests required by the Pennsylvania Department of Education lead to the Pennsylvania Instructional I teacher certificate in Latin. In general, students are encouraged to take at least one course in Latin each semester without interruption. Participation in an approved Education Abroad Study Program is highly recommended, typically during semester six.

RUSSIAN TEACHING OPTION: Completion of this option and pertinent tests required by the Pennsylvania Department of Education lead to the Pennsylvania Instructional I teacher certificate in Russian. Candidates are expected to have taken Russian coursework beyond the intermediate level to be eligible for enrollment in RUS 204. In general, students are encouraged to take at least one course in Russian each semester without interruption. Participation in an approved Education Abroad Study Program is required, typically during semester six.

SPANISH TEACHING OPTION: Completion of this option and pertinent tests required by the Pennsylvania Department of Education lead to the Pennsylvania Instructional I teacher certificate in Spanish. Candidates are expected to have taken Spanish coursework beyond the intermediate level to be eligible for enrollment in SPAN 110. In general, students are encouraged to take at least one course in Spanish each semester without interruption. Participation in an approved Education Abroad Study Program is required, typically during semester six.

Baccalaureate degree candidates must meet the following requirements 1-3 by the end of their third semester:

1. A minimum cumulative grade point average of 3.00
2. Either qualifying scores from the PECT PAPA for Reading, Writing and Mathematics; or qualifying SAT scores for the combined and individual Critical Reading, Writing, and Mathematics sections; or qualifying American College Test Plus Writing composite and individual English/Writing score and Math score as specified by the Pennsylvania Department of Education.
3. Documentation of at least 80 hours of volunteer or paid education work experience with learners of the age group the candidate plans to teach. Candidates for World Languages Education must document 40 of these hours with learners who come from backgrounds that are different from the candidate's.

Requirements 4-9 must be met by the end of the fourth semester when students typically participate in the Entrance to Major process.

4. A grade of "C" or better in all specified courses.
5. Completion of an early field experience specified by the certification program.
6. Completion of a core of Education courses specified by the certification program.
7. Completion of additional credits as specified by the certification program.
8. Completion of at least 48 semester credit hours, including ENGL 15 GWS(3) or ENGL 30 GWS(3), three credits of literature, and six credits of quantification
9. Language proficiency as described below.
10. Approval from the professional education adviser or the head of the pertinent certification program.

French Option:

Proficiency equivalent through FR 3
Literature selection options in language: FR 351 or 352
FR 201 and 202

Spanish Option:

Proficiency equivalent through SPAN 3
Literature selection options in language: SPAN 210, 220, or 253
SPAN 215

German Option:

Proficiency equivalent through GER 3
Literature selection options in language: GER 310
GER 201

Russian Option:

Proficiency equivalent through: RUS 3
Literature selection options in language: RUS 304
RUS 204

Latin Option:

Proficiency equivalent through: LATIN 3

Literature selection options in language: CAMS 45, LATIN 404

For the B.S. degree in World Languages Education with a dual certification option in *Bilingual Education Teaching*, a minimum of 140 credits is required; with an option in *English as a Second Language (ESL) Teaching*, a minimum of 136 credits is required, i.e., a minimum of 123 credits for the companion World Languages Education Teaching option selected, plus 12 credits to meet eligibility for the Program Specialist: ESL credential; with an option in *French Teaching*, a minimum of 128 credits is required; with an option in *German Teaching*, a minimum of 126 credits is required; with an option in *Latin Teaching*, a minimum of 125 credits is required; with an option in *Russian Teaching*, a minimum of 124 credits is required; with an option in *Spanish Teaching*, a minimum of 128 credits is required. (See also [Teacher Education Programs](#).)

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(9-12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 1 credit**REQUIREMENTS FOR THE MAJOR:** 88-106 credits

(This includes 9-12 credits of General Education GS and GH courses.)

COMMON REQUIREMENTS FOR THE MAJOR (ALL OPTIONS): 55 credits [\[18\]](#)**PRESCRIBED COURSES** (52 credits)

EDPSY 14(3), EDTHP 115(3), HDFS 229 GS(3), CI 295(3), WLED 300(3) (Sem: 1-4)

CI 280 GH(3), CI 495E(15), SPLED 400(4), SPLED 403B(3), WLED 411(3), WLED 412(3), WLED 495B(3), WLED 495C(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)

PSYCH 412(3) or HDFS 239 GS(3) (Sem: 3-6)

REQUIREMENTS FOR THE OPTION: 33-51 credits**BILINGUAL EDUCATION TEACHING OPTION:** (48-51 credits)**PRESCRIBED COURSES** (9 credits)

WLED 414(3), WLED 422(3), WLED 444(3) (Sem 5-7)

ADDITIONAL COURSES (39-42 credits)

Select 6 credits of 300- or 400-level option-related courses, with departmental recommendation (Sem: 5-7)

Select 33-36 credits from one of the following emphases areas (proficiency in the language of choice must be demonstrated by either examination or coursework equivalent to the completion of 12 credits in order to enroll in FR 201 or GER 201 or RUS 204 or SPAN 110):

a. French Emphasis (36 credits)

Prescribed Courses (24 credits)

FR 201 IL(3), FR 202(3), FR 331(3), FR 332(3) (Sem: 3-5)

FR 316(3), FR 401(3), FR 402(3), FR 440(3) (Sem: 5-8)

Additional Courses (12 credits)

Select 3 credits from FR 137 GH;IL(3), FR 138 GH(3), FR 139 GH;IL(3) (Sem: 1-4)

Select 3 credits from FR 351(3), FR 352(3), FR 460(3) (Sem: 4-7)

Select 3 credits from FR 417(3), FR 418(3) (Sem: 4-7)

Select 3 credits from FR 430(3), FR 458 IL(3), FR 470 IL(3) (Sem: 5-7)

b. German Emphasis (34 credits)

Prescribed Courses (19 credits)

GER 201 IL(4), GER 301 IL(3), GER 310 IL(3), GER 344 IL(3), GER 401 IL(3), GER 411(3) (Sem: 3-7)

Additional Courses (15 credits)

Select 3 credits from GER 157 GH;US(3), GER 200 GH;IL(3) (Sem: 1-4)

Select 3 credits from GER 412 IL(3), GER 430 IL(3) (Sem: 4-6)

Select 3 credits from GER 431 IL(3), GER 432 IL(3) (Sem: 4-6)

Select 3 credits from GER 480 IL(3), GER 481 IL(3), GER 482 IL(3) (Sem: 4-6)

Select 3 credits from GER 399 IL(3), GER 440 IL(3), GER 482 IL(3), GER 497(1-9), GER 499 IL(3) (Sem: 5-8)

c. Latin Emphasis (33 credits)

Prescribed Courses (24 credits)

CAMS 5 GH;IL(3), CAMS 50 GH(3), CAMS 400(3), LATIN 404(3), LING 102 GH(3) (Sem: 3-5)

LATIN 402(3), LATIN 403(3), LATIN 450(3) (Sem: 5-8)

Additional Courses (9 credits)

Select 3 credits from ANTH 45 GS;US;IL(3), CAMS 33 GH;IL(3), CAMS 45 GH;IL(3) (Sem: 1-4)

Select 3 credits from CAMS 101 GH;IL(3), CAMS 150 GH;IL(3) (Sem 3-5)

Select 3 credits from CAMS 440(3), CAMS 497(1-9), LATIN 497(1-9) (Sem: 5-8)

d. Russian Emphasis (35 credits)

Prescribed Courses (23 credits)

RUS 204 IL(4), RUS 214 IL(4) (Sem: 3-5)

RUS 304 IL(3), RUS 305 IL(3), RUS 400 IL(3), RUS 412 IL(3), RUS 450 IL(3) (Sem: 5-8)

Additional Courses (12 credits)

Select 3 credits from RUS 100 GH;IL(3), RUS 110 GH;IL(3) (Sem: 1-4)

Select 3 credits from RUS 141W(3), RUS 142Y(3), RUS 143 GH;IL(3) (Sem: 1-4)

Select 3 credits from RUS 450 IL(3), RUS 497(1-9) (Sem: 1-4)

Select 3 credits from RUS 427 IL(3), RUS 494(3), RUS 497(1-9), RUS 499 IL(3) (Sem: 5-8)

e. Spanish Emphasis (33 credits)

Prescribed Courses (21 credits)

SPAN 110(3), SPAN 215(3), SPAN 253(3), (Sem: 3-5)

SPAN 410(3), SPAN 412(3), SPAN 314(3), SPAN 440(3) (Sem: 5-8)

Additional Courses (12 credits)

Select 3 credits from SPAN 210(3), SPAN 220(3) (Sem: 1-4)

Select 3 credits from SPAN 316(3), SPAN 418(3) (Sem: 5-8)

Select 3 credits from SPAN 305(3), SPAN 353(3), SPAN 354(3), SPAN 355(3), SPAN 356(3), SPAN 399 IL(3) (Sem: 4-6)

Select 3 credits from SPAN 399 IL(3), SPAN 472(3), SPAN 476(3), SPAN 490(3), SPAN 491(3), SPAN 497(1-9) (Sem: 5-8)

ENGLISH AS A SECOND LANGUAGE (ESL) TEACHING OPTION: (45-49 credits)

Select 33-37 credits: This option must be taken in conjunction with one of the other World Languages Education Teaching Options.

PRESCRIBED COURSES (9 credits)

APLNG 493(3), WLED 444(3), WLED 483(3) (Sem: 4-7)

ADDITIONAL COURSES (3 credits)

APLNG 410(3) or APLNG 484(3) (Sem: 5-7)

Holders of a baccalaureate degree and a valid Pennsylvania Instructional certificate, who seek only the Program Specialist: English as a Second Language credential, must complete the 15 credits of Prescribed and Additional Courses listed below. Typically, they do so in connection with other post-baccalaureate studies.

PRESCRIBED COURSES (12 credits)

APLNG 493 IL(3), WLED 300(3), WLED 444(3), WLED 483(3) (Sem: 4-7)

ADDITIONAL COURSES (3 credits)

APLNG 410(3) or APLNG 484(3) (Sem: 5-7)

FRENCH TEACHING OPTION: (36 credits)**PRESCRIBED COURSES** (24 credits)

(Proficiency in French must be demonstrated by either examination or coursework equivalent to the completion of 12 credits in order to enroll in FR 201.)

FR 201 IL(3), FR 202 IL(3), FR 331 IL(3), FR 332 IL(3) (Sem: 3-5)

FR 316(3), FR 401 IL(3), FR 402 IL(3), FR 440 IL(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

FR 137 GH;IL(3) or FR 138 GH(3) or FR 139 GH;IL(3) (Sem: 1-4)

FR 351 IL(3) or FR 352 IL(3) or FR 460 IL(3); FR 417 IL(3) or FR 418 IL(3) (Sem: 4-6)

Select 3 credits from FR 430 IL(3), FR 458 IL(3), FR 470 IL(3), FR 471 IL(3), FR 489 IL(3) (Sem: 6-7)

GERMAN TEACHING OPTION: (34 credits)**PRESCRIBED COURSES** (19 credits)

(Proficiency in German must be demonstrated by either examination or coursework equivalent to the completion of 12 credits in order to enroll in GER 201.)

GER 201 IL(4), GER 301 IL(3), GER 310 IL(3), GER 344 IL(3) (Sem: 3-5)

GER 401 IL(3), GER 411(3) (Sem: 4-7)

ADDITIONAL COURSES (15 credits)

GER 157 GH;US(3) or GER 200 GH;IL(3) (Sem: 1-4)

GER 412 IL(3) or GER 430 IL(3); GER 431 IL(3) or GER 432 IL(3); GER 480 IL(3) or GER 481 IL(3) or GER 482 IL(3) (Sem: 4-6)

Select 3 credits from GER 399 IL(3), GER 440 IL(3), GER 482 IL(3), GER 497(1-9), GER 499 IL(3) (Sem: 5-8)

LATIN TEACHING OPTION: (33 credits)**PRESCRIBED COURSES** (24 credits)

(Proficiency in Latin must be demonstrated by either examination or coursework equivalent to the completion of 12 credits in order to enroll in other 400-level Latin courses.)

CAMS 50 GH(3), CAMS 400(3), LATIN 404(3), LING 102 GH(3) (Sem: 3-5)

CAMS 5 GH;IL(3), LATIN 402(3), LATIN 403(3), LATIN 450(3) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)

CAMS 33 GH;IL(3) or CAMS 45 GH;IL(3) (Sem: 1-4)

CAMS 101 GH(3) or CAMS 150 GH;IL(3) (Sem 3-5)

Select 3 credits from CAMS 440(3), CAMS 497(1-9), LATIN 497(1-9) (Sem: 5-8)

RUSSIAN TEACHING OPTION: (35 credits)**PRESCRIBED COURSES** (23 credits)

(Proficiency in Russian must be demonstrated by either examination or coursework equivalent to the completion of 12 credits in order to enroll in RUS 204.)

RUS 204 IL(4), RUS 214 IL(4), RUS 304 IL(3), RUS 305 IL(3) (Sem: 3-5)

RUS 400 IL(3), RUS 412 IL(3), RUS 450 IL(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

RUS 100 GH;IL(3) or RUS 110 GH;IL(3) or RUS 141W(3) or RUS 142Y(3) or RUS 143 GH;IL(3) (Sem: 1-4)

Select 3 credits from RUS 450 IL(3) or RUS 497(1-9) (Sem: 4-6)

Select 3 credits from RUS 427 IL(3), RUS 494(3), RUS 497(1-9), RUS 499 IL(3) (Sem: 6-8)

SPANISH TEACHING OPTION: (33 credits)**PRESCRIBED COURSES** (21 credits)

(Proficiency in Spanish must be demonstrated by either examination or coursework equivalent to enroll in SPAN 110.)

SPAN 110(3), SPAN 215(3), SPAN 253(3) (Sem: 3-5)

SPAN 410(3), SPAN 412(3), SPAN 314(3), SPAN 440(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

SPAN 210(3) or SPAN 220(3) (Sem: 1-4)

SPAN 316(3) or SPAN 418(3) (Sem: 5-8)

Select 3 credits from SPAN 305(3), SPAN 353(3), SPAN 354(3), SPAN 355(3), SPAN 356(3), SPAN 399 IL(3) (Sem: 4-6)

Select 3 credits from SPAN 399 IL(3), SPAN 472(3), SPAN 476(3), SPAN 490(3), SPAN 491(3), SPAN 497(1-9) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[18] A grade of C or better per course is required for teacher certification.

Last Revised by the Department: Summer Session 2009

Blue Sheet Item #: 37-06-035

Review Date: 4/14/09

R & T: 01/14/2014

UCA Revision #1: 9/1/06

ED

Director updated: 2/13/12

Women's Studies

University Park, College of the Liberal Arts (WS BA)

PROFESSOR MELISSA WRIGHT, *Department Head*

This interdisciplinary major is designed to develop a broad understanding of the study of women and women's perspectives in all areas of academic scholarship. The focus is on feminist analyses of women's lives, of women's social, cultural, and scientific contributions, and of the structure of sex/gender systems. The interdisciplinary and inclusive nature of the field is reflected in a curricular structure that includes courses cross-listed with a wide variety of departments, courses that deal with aspects of women's lives throughout history, and courses that recognize the diversities of culture, race, religion, ethnicity, age, disability, and sexual orientation.

For the B.A. degree in Women's Studies, a minimum of 123 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 18 credits

BACHELOR OF ARTS DEGREE REQUIREMENTS: 24 credits

(3 of these 24 credits are included in the REQUIREMENTS FOR THE MAJOR, GENERAL EDUCATION, or ELECTIVES and 0-12 credits are included in ELECTIVES if foreign language proficiency is demonstrated by examination.)

(See description of Bachelor of Arts Degree Requirements in this bulletin.)

REQUIREMENTS FOR THE MAJOR: 36 credits [\[1\]](#)

PRESCRIBED COURSES (9 credits)

WMNST 301 GH(3) (Sem: 1-4)

WMNST 400 US;IL(3) (Sem: 6-7)

WMNST 492(3) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

Select 3 credits from WMNST 83 GH(3), WMNST 100 GS;US;IL(3) or WMNST 106N GS;US;IL(3) (Sem: 1-4)

Select 3 credits from WMNST 494(3), WMNST 495(3), WMNST 496(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 6 credits from the program-approved list at the 100-200 level (Sem: 1-4)

Select 15 credits in Women's Studies from the program-approved list and in consultation with an adviser; at least 3 credits must be at the 400 level (Sem: 1-8):

- a. 3 credits of arts and humanities courses
- b. 6 credits of natural or social sciences courses
- c. 3 credits that focus on non-Western women
- d. 3 credits that focus on women of color in the United States

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-06-072

Review Date: 02/19/2013

LA

Dept head updated: 10/01/15

Women's Studies

University Park, College of the Liberal Arts (WS BS)

PROFESSOR MELISSA WRIGHT, Department Head

This interdisciplinary major is designed to develop a broad understanding of the study of women and women's perspectives in all areas of academic scholarship. The focus is on feminist analyses of women's lives, of women's social, cultural, and scientific contributions, and of the structure of sex/gender systems. The interdisciplinary and inclusive nature of the field is reflected in a curricular structure that includes courses cross-listed with a wide variety of departments, courses that deal with aspects of women's lives throughout history, and courses that recognize the diversities of culture, race, religion, ethnicity, age, disability, and sexual orientation.

Students may choose either a Bachelor of Arts or a Bachelor of Science Program. The B.A. degree in Women's Studies is a traditional Women's Studies degree. The B.S. degree is intended for students with strong interest in quantitative skills, women's health and sexuality, and/or women and science, or who wish to pursue a multiple major program with other B.S. degree programs.

For the B.S. degree in Women's Studies, a minimum of 120 credits is required.

Per Senate Policy 83-80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. For more information, check the Recommended Academic Plan for your intended program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

GENERAL EDUCATION: 45 credits

(3-12 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in this bulletin.)

FIRST-YEAR SEMINAR:

(Included in ELECTIVES or GENERAL EDUCATION course selection)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:

(Included in ELECTIVES, GENERAL EDUCATION course selection, or REQUIREMENTS FOR THE MAJOR)

WRITING ACROSS THE CURRICULUM:

(Included in REQUIREMENTS FOR THE MAJOR)

ELECTIVES: 21-30 credits

REQUIREMENTS FOR THE MAJOR: 57 credits^[1]

(This includes 3-12 credits of General Education courses: 3-6 credits of GQ courses, 0-3 credits of GH courses, and 0-3 credits of GS courses.)

PRESCRIBED COURSES (6 credits)

WMNST 301 GH(3) (Sem: 1-4)

WMNST 492(3) (Sem: 7-8)

ADDITIONAL COURSES (36 credits)

Select 3 credits from WMNST 100 GS;US;IL(3) or WMNST 106N GS;US;IL(3) (Sem: 1-4)

Select 3 credits from WMNST 400 US;IL(3) or WMNST 401(3) (Sem: 5-8)

Select 3 credits from WMNST 494(3), WMNST 495(3), or WMNST 496(3) (Sem: 5-8)

Select 27 credits in Women's Studies from the program-approved lists. At least 9 credits must be at the 400 level. The same course may be used to fulfill more than one requirement within Additional Courses. (Sem: 1-8).

a. 6 credits of arts and humanities courses: WMNST 83 GH(3), WMNST 101 GH(3), WMNST 102 GH(3), WMNST 104(3), WMNST 106 GH(3), WMNST 117 GH(3), WMNST 137 GH;US;IL(3), WMNST 194 GH(3), WMNST 407(3), WMNST 438(3), WMNST 462(3), WMNST 466(3), WMNST 490(3) (Sem: 1-8)

b. 9 credits of natural or social sciences courses: WMNST 100 GS(3), WMNST 103(3), WMNST 110 GS(3), WMNST 116 GS(3), WMNST 136 GS(3), WMNST 157(3), WMNST 202 GS(3), WMNST 205(3), WMNST 412(3), WMNST 426(3), WMNST 420(3), WMNST 423(3), WMNST 424 US(3), WMNST 428(3), WMNST 452(3), WMNST 453(3), WMNST 455(3), WMNST 456(3), WMNST 458 GS(3), WMNST 471(3), WMNST 476(3) (Sem: 1-8)

c. at least 6 credits that focus on women's health and sexuality or women in science and technology: WMNST 157(3), WMNST 205(3), WMNST 452(3), WMNST 457(3), WMNST 458(3) (Sem: 1-8)

d. at least 3 credits that focus on non-Western women: WMNST 102 GH(3), WMNST 202 GS(3), WMNST 420(3), WMNST 476(3) (Sem: 1-8)

e. at least 3 credits that focus on women of color in the United States: WMNST 101 GH(3), WMNST 103(3), WMNST 136 GS(3), WMNST 205(3), WMNST 410(3) (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits total from groups a, b, and c, with at least 3 credits from each group.

a. Quantification (GQ) and Research Methods (Sem: 1-8)

b. Values, Ethics, and Scientific Inquiry (Sem: 1-8)

c. Social and behavioral sciences, health sciences, or natural sciences (Sem: 1-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2004

Blue Sheet Item #: 32-01-081

Review Date: 9/2/03

LA

Dept head updated: 10/01/15

MINORS FOR BACCALAUREATE CANDIDATES

A minor is defined as an academic program of at least 18 credits that supplements a major. A minor program may consist of course work in a single area or from several disciplines, with at least 6 but ordinarily not more than half of the credits at the 400-course level. Total requirements are to be specified and generally limited to 18 to 21 credits. Entrance to some minors may require the completion of a number of prerequisites, including courses, portfolios, auditions, or other forms of documentation that are not included in the total requirements for the minor. All courses for the minor require a grade of C or higher.

IMPACT ON A STUDENT'S RECORD

When a student graduates, completion of a minor is recorded on his/her transcript by the Registrar, and the student receives an official certificate certifying completion of the minor. (The certificate is given with the diploma.)

Agricultural Systems Management Minor

University Park, College of Agricultural Sciences (A S M)

The Agricultural System Management minor covers the mechanical, structural, natural resource, processing, and electronic technologies applied in agriculture systems. Students who graduate with this minor will have a solid understanding of how physical sciences and biological principles apply to real world problems in food and fiber industries. With industry teams often formed purposefully with many disciplines represented, this background of applied engineering basics and the focus on quantitative analysis has proven helpful to past graduates.

Integration of the applied technologies is addressed using a systems approach in each required course. Technologies addressed by courses in this minor include combustion engines, electric motors, mechanical and hydraulic power transmission systems, mobile equipment functions and operations, sensor and control systems, building structures, ventilation, drying, irrigation, drainage, food processing. The minor is targeted to students who will use these technologies or manage others who are responsible for systems utilizing these technologies. Most courses required for the minor are taught by engineering faculty, and nearly every course has a laboratory period.

Admission to the minor requires introductory calculus (MATH 110 or MATH 140) and introductory physics (PHYS 211 or PHYS 250).

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (18 credits)

Students must select from the following to account for 18 or more credits: ASM 310(3), ASM 320(3), ASM 327(3), ASM 420(3), ASM 424(3), BRS 221(3), BRS 422(3), BRS 426(3), BRS 428(3), BRS 429(3). A total of 3 credits in BRS 495(1-3), BRS 496(1-3) and/or BRS 497(1-3) may also be used.

Last Revised by the Department: Fall Semester 2005

Blue Sheet Item #: 33-04-002

Review Date: 1/18/05

AG

Biological Engineering Minor

University Park, College of Agricultural Sciences
University Park, College of Engineering (B E)

This minor provides students with an opportunity to apply engineering principles to agricultural and biological production and processing systems and to the management of our natural resources. Courses may be selected by students to gain a better understanding of soil conservation and water quality, food and biological process engineering, structures and their environments, power and machinery, or microbiological engineering.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-19 credits

PRESCRIBED COURSES (3 credits)

BE 300(3) (Sem: 5-6)

ADDITIONAL COURSES (15-16 credits)

Select 6 credits from BE 301(3), BE 302(4), BE 303(3), BE 304(3), BE 305(3), BE 306(3), BE 307(3), BE 308(3) (Sem: 5-8)

Select 9-10 credits from one of the following areas; one course marked with * must be selected (Sem: 5-8)

(a) Power and Machinery Systems: ASM 420(3), ASM 424(3), BE 461(3)*, ME 431(3), ME 480(3)

(b) Biological Systems: BE 468(3)*, CHE 340(3), CHE 438(3), CHE 449(3), ESC 484(3)

(c) Natural Resource Systems: ASM 309(3), BE 467(3)*, BE 477(3), BE 487(3), CE 370(3), CE 371(3), CE 461(3)

(d) Food Process Systems: BE 465(3)*, BE 468(3), CHE 410(3), FDSC 430(3), IE 312(3)

(e) Structural Systems: AE 308(4), BE 462(3)*, CE 340(3), CE 341(3), CE 342(3)

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-03-046

Review Date: 11/13/2012

UCA Revision #2: 7/26/07

EN

Astrobiology Minor

Intercollege Program (ABIOL)

Astrobiology is the study of life in the universe. Astrobiology has become a major focus of scientific research in the United States and a topic often discussed in popular science literature and the general media. The Astrobiology Minor is designed to educate students in this interdisciplinary field covering the varied scientific disciplines that contribute to our general understanding of life, the origin of life, the past history of life on Earth, possible futures for life on Earth, and the possible existence of life on other planetary environments. The principle goal of the minor is to develop student's literacy in astrobiology so that they can critically evaluate claims related to this field that they encounter well after their college education has ended.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENT FOR THE MINOR: 18 credits with at least 6 credits at the 400 level

PRESCRIBED COURSES (3 credits)

BIOL/GEOSC 474(3) (Sem: 5-8)

ADDITIONAL COURSES (9-10 credits)

EARTH 2 GN(3) or GEOSC 21 GN(3) (Sem: 1-6)

ASTRO 140 GN(3) or ASTRO 291 GN(3)(Sem: 5-8)

GEOSC 204(4) or BIOL 427(3)(Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (5-6 credits)

Select 5-6 credits from ASTRO 475(3), BIOL 405(3), BMB 401(3), BMB 402(3), GEOSC 416(3), GEOSC 419(3), METEO 466(3), or MICRB 201(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2000

Blue Sheet Item #: 28-07-084A

Review Date: 7/27/05

Accounting Minor

*Penn State Erie, The Behrend College (ACNTG), Ash Deshmukh (avd1@psu.edu)
Penn State Abington, Dr. Feng Zhang, fzz34@psu.edu*

The accounting minor requires students to complete 16 additional credits in accounting beyond the 4 credits required in ACCTG 211. It is designed to introduce students to advanced topics in financial and cost accounting, as well to the basics of income tax accounting for individuals. This minor can provide an enhanced understanding of accounting information flows, costing systems, and the general tax environment to students majoring in other business areas, and it is a particularly good complement to the finance and management information systems majors. On its own, it will not generally enable students to meet the requirements for professional licensing in accounting.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 20 credits

PRESCRIBED COURSES (14 credits)

ACCTG 211(4) (Sem: 3-4)

ACCTG 310(3), ACCTG 371(4), ACCTG 472(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of additional ACCTG courses, at least 3 credits at the 400-level (Sem: 3-8)

Last Revised by the Department: Fall Semester 2010

Blue Sheet Item #: 39-01-053

Review Date: 08/24/2010

UCA Revision #2: 7/26/07

BD

African American Studies Minor (AFAMR)

Contacts: Abington College, Roy Robson, rrr5237@psu.edu; College of the Liberal Arts, Darryl Thomas, dct10@psu.edu

The Department of African and African American Studies awards a certificate to students who, in addition to meeting the requirements for a major, complete 18 credits in the African American Studies minor. This minor is designed for students interested in African American culture and the educational, social, political, and economic development of people of African descent in the United States. In particular, it provides students with the opportunity to explore the experiences of African Americans using theories and methods originating in the field. Students are made aware of the potential to apply such knowledge to the solution of social, political, and economic problems. The minor also promotes greater understanding of the relationship between African Americans and other ethnic groups.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

AFAM 100 GS;US(3), AFAM/WMNST 101 GH;US(3), AFR 110 GS;IL(3) (Sem: 1-4)

ADDITIONAL COURSES (9 credits)

Select 9 credits; at least 6 credits of AFAM courses must be at the 400 level

AFAM/WMNST 102 GH;IL(3), AFAM/SOC/WMNST 103 US(3), AFAM/RLST 145 GH;US;IL(3), AFAM 146 GH;US(3), AFAM/RLST 147 GH;US(3), AFR/HIST 191

GH;IL(3), AFAM/THEA 208 GA;US;IL(3), AFAM/HIST 210 GH;US(3), COMM/WMNST 205 US(3), ENGL 235 US;IL(3), SOC 119 GS;US(4) (Sem: 1-4)

AFAM 401(3), AFAM/SOC 409 GS;US(3), AFAM 410(3), AFAM/THEA 412 US;IL(3), HIST 415 US;IL(3), AFAM/CAS 422 US;IL(3), AFAM/HIST 431 US;IL(3), CRIMJ

451 US(3), ECON 436 US(3), EDTHP 447(3), ENGL 463 US(3), AFAM/HIST 465 US(3), AFAM/ENGL 469 US(3) (Sem: 5-8)

Last Revised by the Department: Summer Session 2005

Blue Sheet Item #: 33-01-132

Review Date: 8/31/04

UCA Revision #2: 7/26/07

LA

African Studies Minor

University Park, College of the Liberal Arts (AFRST)

The minor in African Studies is designed for students interested in exploring the political, historical, socioeconomic, and cultural aspects of Africa. The minor provides students with the opportunity to examine both the totality of Africa and/or specific geographical and cultural regions from several disciplinary perspectives.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

AFR 110 GS;IL(3), AFR 191 GH;IL(3), AFR 192 GH;IL(3) (Sem: 1-2)

ADDITIONAL COURSES (9 credits, 6 of which must be AFR courses at the 400 level)

AFR 105 GN;IL(3), AFR/WMNST 202 GS;IL(3), AFR 209 GS;IL(3), AFR 403(3), AFR 405(3), CMLIT 3(3) (Sem: 1-4)
AFR/PLSC 434(3), AFR 440 US;IL(3), AFR 443 IL(3), AFR/PLSC 454 IL(3), AFR/PLSC 459(3), AFR/PLSC 464(3), AFR 495(3), AFR 496(3), AFR 499 IL(3), CMLIT 422 IL(3), CMLIT 423 IL(3), ECON 413W(3), ECON 475W(3), FR 458 IL(3), GEOG 429 US;IL(3), GEOG 444(3), PLSC 481(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-04-062

Review Date: 01/15/2013

LA

Agribusiness Management Minor

University Park, College of Agricultural Sciences (AG BM)

The Agribusiness Management minor is offered for students who wish to add business and management principles to their undergraduate major.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (9 credits) [\[1\]](#)

AGBM 102(3), AGBM 106(3), AGBM 200(3) (Sem: 2-6)

ADDITIONAL COURSES (12 credits) [\[1\]](#)

Select 3 credits from: AGBM 101 GS(3) or ECON 102 GS(3)

Select 3 credits from: AG 301(3), AGBM 302(3), AGBM 308(3), AGBM 320(3), AGBM 338 IL(3) and select 6 credits from any 400-level ABGM courses (excluding, unless approved by the AGBM program, AGBM 496)

OR

Select 9 credits from any 400-level AGMB courses (excluding, unless approved by the AGBM program, AGBM 496)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2018

Blue Sheet Item #: 46-05-001

Review Date: 2/20/2018

AG

Agricultural Communications Minor

University Park, College of Agricultural Sciences (AGCOM)

Through the Department of Agricultural Economics, Sociology, and Education, this interdisciplinary program of study is designed to introduce majors in the College of Agricultural Sciences to the skills and professional practices in communications and to the interdependence between communications and society. A grade of C or better is required in every course used to satisfy the requirements for the minor.

Students are required to complete a total of 19 credits, including 6 credits at the 400 level.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES (7 credits)

COMM 160(1) (Sem: 1-2)

COMM 260W(3) (Sem: 3-4)

AGCOM 462(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 3-6 credits from AEE 330(3), AEE 440(3), or AGCOM 495(1-3) (Sem: 3-8)

Select 3-6 credits from COMM 180 GS(3), COMM 283(3), COMM 401(3), COMM 403(3), COMM 405(3), COMM 409(3), COMM 411(3), COMM 413W(3), or COMM 460(3) (Sem: 3-8)

Select 3 credits from COMM 401(3), COMM 403(3), COMM 405(3), COMM 409(3), or COMM 413W(3) (Sem: 5-8)

Last Revised by the Department: Summer Session 2007

Blue Sheet Item #: 35-02-001

Review Date: 03/12/08

AG

Agronomy Minor

University Park, College of Agricultural Sciences (AGRO)

Agronomy is concerned with the principles and practices of field crop production and the conservation of soils and land resources. Areas of emphasis include crop production and protection, plant breeding, forage management, nutrient management, and soil conservation and fertility. Education in this minor emphasizes the principles of plant and soil management and the basic sciences upon which these principles are grounded. A minor in agronomy can complement several majors, and will enhance career opportunities in farm management and the agricultural industry. Employment possibilities include farm chemical and fertilizer store managers, sales representatives, field and laboratory technicians, crop management consultants, extension agents, soil and water conservationists, and inspectors for various state and federal regulatory agencies.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (6 credits)

AGRO 28(3), SOILS 101 GN(3) (Sem: 3-4)

ADDITIONAL COURSES: (6-7 credits)

Select 6 credits from AGRO 410(4), AGRO 423(3), AGRO 425(3), AGRO 438(4), or SOILS 402(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS: (5-6 credits)

Select 5-6 credits in consultation with an adviser (Sem: 5-8)

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-02-001

Review Date: 10/08/2013

AG

American Studies Minor

Capital College (AMSTD)

Capital College - Simon Bronner, sib2@psu.edu

Abington College - Andrew August, axa24@psu.edu

Penn State Brandywine - Julie Gallagher, jaq63@psu.edu

Penn State Fayette - Jay Precht, jhp21@psu.edu

Penn State York - Robert Farrell, rfr10@psu.edu

This interdisciplinary minor is designed for students who want to complement their major program. American Studies is an interdisciplinary field that explores the patterns of life and thought of the American peoples, past and present. American Studies helps students prepare for further study or careers in education, government, business, science, communication, law, museums, historical and cultural agencies, and archives. Internships are available for qualified students in American Studies. The internship is an extension of the student's academic studies and is an opportunity to gain practical experience.

A student seeking admission to the American Studies Minor must first be admitted to a major at Penn State. Upon admission, a Minor Adviser will be appointed from within the American Studies faculty to guide the student. For the American Studies Minor, a total of 18 credits is required. At least 6 credits must be at the 400 level.

A grade of C or better is required for all courses in the minor.

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

AMST 491W(3) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)

AM ST 100 GH;US(3) or AM ST 100Y GH(3) (Sem: 1-4)

Select 12 credits from any American Studies offerings (AMST) or from courses related to American Studies chosen from a list provided by the college. At least six of those credits must be at the 400 level. Substitutions must be approved by the American Studies Program head at the appropriate college. (Sem: 5-8)

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-02-019

Review Date: 10/08/2013

UCA Revision #2: 7/26/07

CL

Animal Science Minor

University Park, College of Agricultural Sciences (AN SC)

The Animal Science minor is designed for students who wish to supplement their academic major with studies in animal science. Students are required to complete a minimum of 23 credits, at least 6 of which must be at the 400 level. A grade of C or better must be obtained in each course in order to complete the minor.

The core of prescribed courses develops a foundation in the various basic disciplines of animal science. Additional courses may be selected by the student to emphasize the production/management of beef cattle, companion animals, dairy cattle, horses, poultry, sheep, or swine or to emphasize genetics, nutrition, or physiology.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 23-24 credits

PRESCRIBED COURSES (11 credits) [\[1\]](#)

ANSC 201(4), ANSC 290(1), ANSC 301(3) (Sem: 3-4)

CHEM 202(3) (Sem: 3-6)

ADDITIONAL COURSES (6-7 credits) [\[1\]](#)

Select 3 credits from ANSC 207(2) and ANSC 208(1); or ANSC 300 GN(3) (Sem: 3-4)

Select 3-4 credits from ANSC 305(3), ANSC 306(3), ANSC 308(4), ANSC 309(4), ANSC 310(3), ANSC 311(4), ANSC 327(3), CHEM 210(3) (Sem:3-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of 400-level AN SC courses (Sem: 7-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

AG

Anthropology Minor (ANTH)

Contacts: Abington College, Michael Bernstein, mib70@psu.edu; College of the Liberal Arts, Timothy Ryan, tmr21@psu.edu

The Anthropology minor is designed to provide undergraduate students with exposure to the range of human variation across time and space. Our minors enroll in courses that explore that variation through the subdisciplines of archaeological, biological, and cultural anthropology. We maintain laboratory facilities in all three subdisciplines and the Matson Museum of Anthropology, all excellent learning facilities for our students. In addition, the department offers summer field school opportunities in cultural anthropology and archaeology. A Minor in Anthropology is excellent preparation for further study in any discipline that requires ability to understand and deal with other cultures, for example, teaching, counseling, business, medicine, law, or communications.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

ANTH 2 GS(3), ANTH 21 GN(3), ANTH 45 GS;US;IL(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits from any ANTH course except ANTH 1 GS;US;IL(3) (Sem: 1-8)

Select 6 credits from the ANTH 400-489 range (Sem: 3-6)

Last Revised by the Department: Fall Semester 2001

Review Date: 4/9/02

LA

Arabic Language Minor

University Park, College of the Liberal Arts (ARAB)

Modern Arabic is a crucially important world language. The minor in Arabic is intended to provide students with a good working knowledge of modern Arabic language, cultures, and societies, in order to broaden students' horizons and sharpen their awareness and abilities in internationalism and globalization. Students undertake three years of language study (or equivalent); education abroad can be included.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (12 credits)

ARAB 1(4), ARAB 2(4), ARAB 3(4) (Sem: 1-4)

ADDITIONAL COURSES* (9 credits)

Select 3 credits from ARAB 110 IL(3), ARAB 197(1-9), ARAB 199 IL(1-12), ARAB 296(1-18), ARAB 297(1-9), ARAB 299 IL(1-12), ARAB 397(1-9), or ARAB 399 IL(1-12) (Sem: 1-8)

Select 6 credits from ARAB 401 IL(3), ARAB 402 IL(3), ARAB 494(1-12), ARAB 496(1-18), ARAB 497(1-9), or ARAB 499 IL(1-12) (Sem: 5-8)

* Because this minor focuses on developing language proficiency in modern Arabic, special topics courses in English or other courses taught in English do not satisfy this requirement.

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-05-115

Review Date: 02/22/2011

Arboriculture Minor

College of Agricultural Sciences (ARBOR)

The Arboriculture minor has been designed to provide students with a comprehensive introduction to the principles and practices of the arboriculture profession. Combined with a major in Horticulture or Forestry, this minor will help prepare students for a career in arboriculture. The courses in the minor include arboriculture, disease and insect control, the planting and maintenance of plants in the landscape, and management of trees in urban environments. HORT 201, and many of the introductory positions available to graduates with an arboriculture minor, require physical strength and conditioning. The profession of arboriculture has many opportunities available in the application of arboricultural practices, sales, consulting, management of companies, and management of urban trees.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 26-28 credits

PRESCRIBED COURSES: (18 credits)

HORT 201(2), HORT 301(3), SOILS 101 GN(3) (Sem: 3-4)

ENT 313(2), ENT 314(1) (Sem: 5-6)

FOR 401(3), HORT 408(4) (Sem 7-8)

ADDITIONAL COURSES (8-10 credits)

Select 3 credits from FOR 203(3), HORT 137(3) (Sem: 3-4)

Select 2-3 credits from PPEM 300 GN(3) or PPEM 318(2) (Sem:5-6)

Select 3-4 credits from BIOL 110 GN(4) or BIOL 127 GN(3) (Sem: 5-6)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

AG

Architectural History Minor

University Park, College of Arts and Architecture (ARC H)

This interdisciplinary minor administered by the Department of Art History is designed for students interested in exploring architectural history from a variety of disciplines.

This minor is open to students in all majors. Majors in Art History, Anthropology, Architecture, Landscape Architecture, Classics and Ancient Mediterranean Studies, and Geography may only double count 6 credits taken in their major field towards this minor. A grade of C or better is required in all course requirements for the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (6 credits) (Sem: 1-4)

ARTH 201(3), ARTH 202(3)

ADDITIONAL COURSES (15 credits)

Select 3 credits from the following: ARCH 210 GA(3) or LARCH 60 GA;US;IL(3)

Select 12 credits from the following list, including at least 6 at the 400 level. No more than 9 credits may be taken from any one department. (Sem: 1-8)

AMST/ARTH 307 GA;US(3), INART 410(3), AMST 462(3), AMST 481(3)

ANTH 8 GS;IL(3), ANTH 9 GS;IL(3), ANTH 420(3), ANTH 422(3), ANTH 423(3)

ARCH 312(3), ARCH 316(3), ARCH 317(3), ARCH 417(3), ARCH 499(3), ARTH 120 GA;IL(3), ARTH/AMST 307 GA;US(3), ARTH 315 GA;IL(3), ARTH 330 GA; IL(3), ARTH 401(3), ARTH 405(3-6), ARTH 411(3-9), ARTH 412(3), ARTH 415(3), ARTH 420(3), ARTH 440 IL(3), ARTH 456 IL(3), ARTH 458 IL(3), ARTH 497(1-9) (if topic is architecture)

CAMS 12 GH;IL(3), CAMS 15 GH(3), CAMS 20 GH(3), CAMS 90 GH;IL(3), CAMS 140 GH(3), CAMS 150 GH(3)

FR 137 GH;IL(3), GEOG 320 GS;US;IL(3), GEOG 122 GH;US(3), GEOG 423 US(3), GEOG 427(3), HIST 456 IL(3), INART/AMST 410(3), INART 415(3), LARCH 365(3), LARCH 497(1-9) (if topic is history)

Last Revised by the Department: Summer Session 2010

Blue Sheet Item #: 38-05-022

Review Date: 02/23/2010

AA

Architecture Studies Minor

University Park, College of Arts and Architecture (ARCST)

The Architecture Studies Minor will permit students in other majors the opportunity to gain insight into the discipline of Architecture. Students enrolled in the Bachelor of Architecture or Bachelor of Science in Architecture degree programs are not eligible to enter the Minor in Architecture Studies. However, students transferring out of Architecture may opt to receive recognition for their efforts and time spent in the major by completing requirements for the minor. The minor is intended to augment study in allied design majors, but graduates may not pursue licensure to practice Architecture.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits
6 credits must be at the 400-level

ADDITIONAL COURSES: (15 credits)

Architectural History and Theory: (6 credits)

Select 3 credits from ARCH 100 GA(3) or ARCH 210 GA(3) (Sem: 1-2)

Select 3 credits from ARCH 316 GA(3), ARTH 201 GA;IL(3), or ARTH 202 GA;US;IL(3) (Sem: 1-2)

Cultural Perspectives in Architecture: (3 credits)

Select 3 credits from ARCH 312(3), ARCH 316 GA(3), ARCH 317(3), ARCH 499 IL(3), ARTH 120 GA;IL(3), ARTH 140 GA;IL(3), ARTH 308 GA(3), ARTH 315 GA;IL(3), ARTH 330 GA;IL(3), ARTH 401 IL(3), ARTH 405 US;IL(3), ARTH 412 IL(3), ARTH 413(3), ARTH 415 US(3), ARTH 420 IL(3), ARTH 440 IL(3), ARTH 456 IL(3), ARTH 458 IL(3), ARTH 460 IL(3), ASIA 315 GA;IL(3), ASIA 440 GA;IL(3), LARCH 65 GA;US;IL(3) (Sem: 3-8)

Architectural Design Applications: (6 credits)

Select 6 credits from ARCH 121(2)[3], ARCH 122(2)[3], ARCH 130A(3 max.)(2), ARCH 131(4)[3], ARCH 132 (4)[3], ARCH 412(3), ARCH 442(3)[2], ARCH 443(2), ARCH 481(3), ARCH 497(1-9), ARCH 499 IL(2-3) (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS: (6 credits)

Architectural Capstone or Supporting Course: (3 credits)

Select 3 credits within ARCH (ARCH prefix courses excluding ARCH 130A and ARCH 441) (Sem: 5-8)

Architectural Supporting Course: (3 credits)

Select 3 credits in ARCH (ARCH prefix courses excluding ARCH 130A and ARCH 441) or in specific AE or LARCH courses from an approved department list (Sem: 5-8)

[2] Courses available to Architectural Engineering majors only

[3] Courses available to Architecture majors only.

Last Revised by the Department: Summer Session 2014

Blue Sheet Item #: 43-01-019

Review Date: 08/19/2014

AA

Art History Minor

University Park, College of Arts and Architecture (ART H)

The minor in Art History provides students with a broad introduction to the history of art, as well as the opportunity for more specialized study in one or two fields. Specialized study may concentrate upon one region of the world (e.g. India) or one period (e.g. Renaissance). A student should seek the advice of her/his minor adviser on course selections. The study of art history develops a student's visual acuity by providing a critical understanding of visual culture in a diversity of societies around the world. Students learn to understand art within the contexts of religion, politics, philosophy, culture, technology, society, and gender. A minor in Art History can be of particular interest for students pursuing careers in art, art education, history, anthropology, archaeology, classics, English, foreign language/literature, cultural studies, international business, and arts administration. Students majoring in Art History cannot take this minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES: (6 credits)

ARTH 111 GA;IL(3), ARTH 112 GA;IL(3) (Sem: 1-4)

ADDITIONAL COURSES: (3 credits)

Select 3 credits from: ARTH 120 GA;IL(3), ARTH 130 GA;US;IL(3), ARTH 301 GA;IL(3), ARTH 315 GA;IL(3), ARTH 320 GA;IL(3), ARTH 330 GA;IL(3), or ARTH 335 GA;IL(3) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS: (12 credits)

Select 6 credits of 001 to 400-level ARTH courses, except ARTH 100 GA(3) (Sem: 3-8)

Select 6 credits of 400-level ART H courses (Sem: 3-8)

(Note: Students are encouraged to use these supporting courses to focus their studies in one or two areas of art history and should discuss these course selections with an Art History faculty member.)

Last Revised by the Department: Spring Semester 2010

Blue Sheet Item #: 38-05-021

Review Date: 02/23/2010

AA

Art Minor

Contact: Graeme Sullivan, gl527@psu.edu; Roy Robson, rrr5237@psu.edu

College of Arts and Architecture (ART_UMNR)

The B.A. degree in art provides a comprehensive liberal education coupled with professional resident instruction in art. Students electing to take the Art Minor will gain access to skills and knowledge to enable them to understand and integrate a range of art and design methods and content to broader academic interests. Students completing this minor will find a flexible coursework structure that ensures their objectives and artistic interests are met. Depending on each student's objectives and course choices they may choose courses that provide a foundation for a liberal arts education, preparation for a double major, preliminary stages towards a professional career in visual arts and design, or broad grounding for graduate studies. Each student must elect an area of concentration from one or more of the following: ceramics, drawing and painting, new media, photography, printmaking, or sculpture. The Art Minor enables students to advance and integrate visual arts and design knowledge and skills in a range of areas and is especially appropriate for students with substantial interest in art and design, but who intend to pursue careers in other fields.

Retention Requirements: Students in the Art Minor are expected to maintain acceptable academic growth as demonstrated by earning of grades of C or higher. Failure to do so is grounds for an academic warning, with clear written strategies and a time frame for the student to return to good standing. Should the student not address the issue, he/she may be advised by faculty to consider a different program or minor.

A grade of C or better is required for all courses in the minor.

Some courses may require prerequisites.

For a Minor in Art, a minimum of 18 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

ART 110(3), ART 111(3)

ADDITIONAL COURSES (3 credits)

ART 201(3); ART 203(3); ART 211 US(3); ART 220(3); ART 223(3); ART 230(3); ART 240(3); ART 250(3); ART 260(3); ART 280(3); ART 290(3); ART 296(1-18); ART 297(1-9) ART 299 IL(1-12); ARTH 111 GA;IL(3); ARTH 112 GA;IL(3); ARTH 120 GA;IL(3); ARTH 130 GA;US;IL(3); ARTH 140 GA;IL(3)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Students must take 9 credits within one or more of the following areas of concentration: Ceramics, Drawing and Painting, New Media, Sculpture, Printmaking, or Photography. These 9 credits must include 3 credits at the 300-level and 6 credits at the 400-level.

Blue Sheet Item #: 45-06-003

Review Date: 4/4/17

Asian Studies Minor

Abington, C. Pierce Salguero (*cps14@psu.edu*)
University Park, College of the Liberal Arts (ASIA)

This is an interdisciplinary minor designed for students with special interests in the Asian area. In addition to the requirements of the student's major department, the minor consists of 21 credits selected from such disciplines as anthropology, art history, economics, geography, history, linguistics, literature, philosophy, political science, religious studies, speech, theatre arts, and appropriate Asian languages.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (3 credits)

ASIA 100 GH;IL(3) (Sem: 1-4)

ADDITIONAL COURSES (3 credits)

HIST 174 GH;IL(3), HIST 175 GH;IL(3), HIST 176 GH;IL(3), or RLST 3 GH;US;IL(3) (Sem:3-6)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits from a departmental list, at least 6 at the 400 level; independent study credits selected in consultation with adviser; additional further credits in language studies beyond the first semester may be permitted up to 15 credits. (Sem: 1-8)

Courses not on the list that deal substantially with some aspect of Asia in any discipline may also count, pending approval of an adviser. Students seeking to combine an Asian Studies minor with a major in an Asian language (such as CHNS or JAPNS) may include up to 15 credits of language study in a SECOND Asian language, but must have at least 3 courses that do not overlap with their other major(s) or minor(s) in Asian Studies or other Asian languages.

Lasted Revised by the Department: Summer Session 2014

Blue Sheet Item #: 43-01-066

Review Date: 08/19/2014

LA

Astronomy and Astrophysics Minor

University Park, Eberly College of Science (ASTRO)

The minor in Astronomy and Astrophysics, available at the University Park campus, provides educational options to students with interest in astronomy but with principal commitments to an allied field. It is designed principally for majors in Aerospace Engineering, Electrical Engineering, Engineering Sciences, Geosciences, Meteorology, and Physics. The educational objectives are to provide students with a profound understanding of the large-scale properties and processes in our Universe including planets and solar systems, our Sun and other stars, our Galaxy and other galaxies; and cosmology. Students in the minor survey the field in the 200-level sequence and then select from a choice of advanced astronomy and allied courses. Minors will be encouraged to take advantage of the many undergraduate research opportunities in the department, often using space-based observatories.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 22-23 credits

PRESCRIBED COURSES (10 credits)

PHYS 211 GN(4) (Sem: 1-2)

ASTRO 291 GN(3), ASTRO 292 GN(3) (Sem: 3-4)

ADDITIONAL COURSES (6-7 credits)

Select 6-7 credits from additional ASTRO 400-level courses, AERSP 308(3), AERSP 312(3), EE 472(3), GEOSC 474(3), METEO 466(3), or PHYS 458(4) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from 400-level ASTRO courses, except ASTRO 496 (Sem: 5-8)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

UCA Revision #2: 7/26/07

SC

Supply Chain and Information Systems Minor

World Campus, Smeal College of Business (SC&IS)

The Supply Chain and Information Systems (SC&IS) minor is structured to provide the student with a working knowledge of the discipline and to complement a student's major field of study. The SC&IS minor provides exposure to core supply chain processes, methods, and techniques and to directly related enabling enterprise system technologies. Students completing the SC&IS minor can apply their expanded knowledge in both manufacturing and service sectors of the economy.

The SC&IS minor is offered on-line through World Campus. SC&IS contains World Campus sections of MIS 404, SCM 445 and SCM 465 that contain SAP-specific topics necessary for the minor. Planning and course selection is important in order to earn proper credit in the SAP-specific courses. The SC&IS minor is not open to SC&IS major (Smeal) and PSCM majors (Behrend and Capital).

A grade of C or better is required in all courses used to meet the requirements of the SC&IS minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (12 credits)

SCM 301(3), SCM 404(3), SCM 406(3), SCM 445(3) (Sem: 4-7)

ADDITIONAL COURSES: (6 credits)

Select 6 credits from the following: MIS 404(3), SCM 460(3), SCM 465(3) (Sem: 5-8)

Lastest Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-022

Review Date: 04/08/2014

UCA Revision #1: 8/14/06

BA

Biochemistry and Molecular Biology Minor

University Park, Eberly College of Science (B M B)

The Biochemistry and Molecular Biology minor provides a foundation in traditional biochemistry and an exploration of the current understanding of molecular biology. The fields of biochemistry and molecular biology are extensively interconnected and are taught in the context of the biology of the cell. Stated another way, the B M B minor is a substantial treatment of life processes at the molecular and cellular levels. The minor requires coursework in general biochemistry, cell biology, and molecular biology. A required laboratory course exposes students to the basic techniques and instrumentation used in modern biochemistry and molecular biology laboratories. Students considering this minor should be comfortable with the study of chemistry.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 33-35 credits

PRESCRIBED COURSES: (29-30 credits)[\[1\]](#)

CHEM 110 GN(3), CHEM 112 GN(3) (Sem: 1-2)

BMB 251(3), BMB 252(3), CHEM 210(3), CHEM 212(3) (Sem: 3-4)

BMB 400(2-3), BMB 401(3), BMB 402(3), BMB 442(3) (Sem: 5-6)

ADDITIONAL COURSES: (3 credits)

BIOL 222(3) or BIOL 322(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS: (0-3 credits)[\[1\]](#)

Select 0-3 credits of B M B courses at the 400-level (Sem: 7-8)

Note: BMB 408(1-2) and BMB 496(1-18) may not be used to fulfill requirements for the minor.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

SC

Business Administration Minor

Capital College (BADMN)
Penn State Abington, Dr. Feng Zhang, fzz34@psu.edu

This interdisciplinary minor provides students in all majors with a business-oriented supplement to their major fields of study. It is intended to provide a set of basic skills that complement the unique competencies gained in their non-business disciplines. It is strongly recommended that students taking this minor elect at least one course in mathematics through college calculus, and a second course in descriptive and inferential statistics, as part of their General Education requirements or electives for the major. Students taking this minor may not have more than 25 percent of their total credits for graduation in business courses, and must receive a grade of C or better in all courses required for the minor. Students pursuing the Business Administration minor should apply to the School of Business Administration and select business courses in consultation with a business adviser.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 22 credits

PRESCRIBED COURSES (7 credits)
ACCTG 211(4), MGMT 301(3) (Sem: 3-4)

ADDITIONAL COURSES (9 credits)
Select 3 credits from ECON 102 GS(3) or ECON 104 GS(3) (Sem: 3-4)
Select 6 credits from BA 243(4) or BLAW 243(3), BA 100 GS(3), BA 364 US:IL(3), ECON 342(3), ECON 351(3), FIN 100(3) or FIN 301(3), MGMT 321(3), MIS 390(3), MKTG 221(3) or MKTG 301(3), SCM 320(3) (course prerequisites must be met)(Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)
Select 6 credits at the 400 level in ACCTG, BA, ECON, FIN, HCM, MIS, IST, MGMT, MRKT, or BESC 408(3), COMM 414(3), PSYCH 473(3), or other School-approved courses (course prerequisites must be met) (Sem: 5-8)

Last Revised by the Department: Summer Session 2002

Blue Sheet Item #: 30-06-054

Review Date: 1/14/03

UCA Revision #1: 8/3/06
UCA Revision #2: 7/26/07

CL

Biology Minor

Penn State Erie, The Behrend College (BIOBD)

Contact: Beth Potter, bap16@psu.edu

The minor in Biology gives students opportunities to combine a background in the biological sciences with other majors. The minor can provide valuable expertise in cross-disciplinary areas, such as mathematical biology, biochemistry, and biophysics; or a biological grounding in fields like psychology or ecology.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (4 credits)

BIOL 110 GN(4) (Sem: 1-4)

ADDITIONAL COURSES (8 credits)

Select 8 credits from BIOL 220W GN(4), BIOL 230W GN(4), or BIOL 240W GN(4) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of additional 400-level BIOBD courses, excluding BIOL 492(1), BIOL 496(1-12), BIOL 495(1-12) and BIOL 496(1-18) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

UCA Revision #2: 7/26/07

BD

Biomedical Engineering Minor

University Park, College of Engineering (BME)

This interdisciplinary minor is designed for students interested in the application of engineering principles to medical and biological problems. The minor is particularly suitable for students pursuing an undergraduate degree in a different engineering major, physics, or other applied science who are seeking careers in health-related professions. PHYS 211 GN(4), PHYS 212 GN(4), and calculus through differential equations (MATH 250 or 251) are required for entrance to the minor. Additional prerequisites for prescribed and supporting courses may be required and should be researched prior to applying for the minor (e.g. CHEM 112 GN(3) and CMPSC 200 GQ(3)). Students interested in pursuing this minor should contact the Department of Biomedical Engineering with any questions or for more information.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-20 credits

ADDITIONAL COURSES (6-8 credits)

Select 3-4 credits of physiology from BIOL 141 GN(3), BIOL 240W GN(4) or BIOL 472(3) (Sem: 3-6)

Select 3-4 credits of molecular/cell biology from BMB 251(3), BME 201(3), or BIOL 230W GN(4) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 9-12 credits of Biomedical Engineering (BME) coursework from 3-credit courses at the 400, or 500 level 300-level courses will be considered by petition and only 3 credits of research or independent study credit may be used. (Sem: 5-8)

Select 0-3 credits of electives from Biomedical Engineering-related courses (department list) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-03-039

Review Date: 11/19/2013

UCA Revision #1: 8/2/06

EN

Biology Minor (BIOL)

Contacts: Altoona College, Edward Levri, epj1@psu.edu; Eberly College of Science, Barbara DeHart, bzd2@psu.edu; Penn State Abington, Eric Ingersoll, epi1@psu.edu; Penn State Berks, Maureen Dunbar, med18@psu.edu; Penn State York, Dr. Anne Vardo-Zalik, amv12@psu.edu

This minor is designed for students in non-Life Science majors, who desire to obtain an in-depth and well-rounded knowledge of Biology -- the science of life and living organisms. This minor is not intended for "Life Science" oriented majors, including Biological Anthropology, Premedicine, and Science, Life Science option. After taking an introductory survey course which exposes students to the basics of Biology, including the chemistry of life, cell structure, genetics, mechanisms of evolution and evolutionary history of biological diversity, plant and animal form and function, and ecology, students select additional courses based on their biological emphasis to account for a total of 18-20 credits. In conjunction with the student's major, the minor prepares students for entry to graduate school or professional school programs, as well as for technical or research careers with governmental agencies or industry. Majors complemented by this minor would include but not be limited to other life and physical sciences, engineering, and business.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 17-21 credits

PRESCRIBED COURSES (4 credits)

BIOL 110 GN(4) (Sem. 5-6)

ADDITIONAL COURSES (7-8 credits)

Select 7-8 credits from BIOL 129 GN(4), BIOL 141 GN(3), BIOL 142(1), BIOL 222(3), BIOL 220W GN(4), BIOL 230W GN(4), BIOL 240W GN(4), BIOL 322(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6-9 credits)

Select 6-9 credits from 400-level Biology courses (BIOL 400, BIOL 496, and SC 495 credits may not be used to fulfill this requirement.) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2007

Blue Sheet Item #: 35-06-521

Review Date: 4/10/07

Black Diaspora Studies Minor

University Park, College of the Liberal Arts (BLDSP)

The minor in Black Diaspora Studies is designed to broaden the perspectives of students through an examination of the international/transnational dimensions of the experiences of African and African-descent populations, particularly those in the Western Hemisphere. Since the early sixteenth century, when Europe, the Americas, and Africa were brought into a pattern of sustained interaction following the onset of the Age of European Discovery, the African slave trade and other forms of migration and exchange have been critical to the formative experience of Africans and African-descent populations linked by the Atlantic. The intensity and impact of those exchanges have varied over time, but the presence of Africans and African-descent populations in the evolution of Atlantic civilization constitutes the core of the study of the African Diaspora.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

A. PRESCRIBED COURSES (9 credits)

AFR 110 GS;IL(3), AFAM/HIST 211 GH;US;IL(3), AFAM 100 GS;US(3) (Sem: 1-4)

B. ADDITIONAL REQUIREMENTS (9 credits, 6 of which must be at the 400 level)

AFAM/SPAN 132 IL(3), AFR/HIST 191 GH;IL(3), AFAM/HIST 250 GH;IL(3) (Sem: 1-4)

AFAM/HIST 431 US;IL(3), AFAM/HIST 432 IL(3), AFR 440 US;IL(3), PLSC 453 IL(3) (Sem: 5-8)

Last Revised by the Department: Summer Session 2005

Blue Sheet Item #: 33-01-134

Review Date: 8/31/04

LA

Bioethics and Medical Humanities Minor

Intercollege Program (BMH)

The tremendous current activity in the biomedical sciences affects both the public and private sectors, including medical care, the pharmaceutical industry, genetics, environmental epidemiology, agricultural science, the insurance industry, occupational health, forensic sciences, and behavioral variation. All these areas go beyond the science itself, with varied impact on people in different age, sex, ethnic, geographic, or economic segments of society. For that reason, life and health sciences research has major social implications that bear on humanities disciplines ranging from ethics and history to religious studies and literature, affecting clinical practice, agricultural practice and research, public policy and private investment. Understanding these issues is important for an informed citizenry. Students electing the BMH minor will start with a basic background of biology coursework, and will take a curriculum that includes 18 credit hours, beginning with an introductory course on basic ideas of bioethics, followed by a choice of other relevant humanities courses, and capped with an integrative course involving original research by the student. The minor will be suitable for students in almost any major, especially students going on to further academic work or careers in health, the life sciences, informatics, forensic or legal professions.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

BMH 490(3), PHIL 132 GH(3)/RLST 131 GH(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 12 credits, at least 3 credits must be at the 400 level, and one course must be selected from the list of Ethics courses:

Ethics (select at least one course from this group) BBH 301(3), BIOL 461(3), NURS 464 US;IL(3), PHIL 432(3) or STS 432(3), PHIL 498(1-9), WMNST 458 GS(3) (Sem: 5-8)

Humanities CAS 253(3), CAS 453(3), HIST 103 GH;IL(3) (Sem: 5-8)

Other ANTH 470(3), ANTH 471H(3), CSD 269 US;IL(3), FDSC 280 GH(3), HPA 301(3), KINES 345(3), NUTR 430 IL(3), WMNST 250 US(3) (Sem: 5-8)

Last Revised by the Department: Summer Session 2007

Blue Sheet Item #: 35-01-182

Review Date: 8/29/06

Co-chairs added by Publications: 06/06/07

LA

Business Minor

Penn State Abington, Dr. Feng Zhang, fzz34@psu.edu
University College via World Campus, Lehigh Valley

Contacts: Business Minor Contact at campuses offering the BSB major or University College at: sah43@psu.edu; Lehigh Valley - Maung Min

The Business minor is a strong complement to virtually any major. Courses prescribed for the minor are taught by Penn State faculty providing courses to the B.S. in Business and the A.S. in Business Administration. It provides students with the opportunity to develop and apply skills appropriate to the business contexts of their chosen majors. Students pursuing the Business minor must complete thirteen credits of prescribed course work and six credits of additional course work. A grade of C or better is required for all courses in the minor. The prescribed thirteen credits of coursework presents students with a critical foundation of core business disciplines: accounting, management, marketing, and either macro- or micro-economics. The six credits of additional coursework must be taken at the 400-level.

The additional coursework enables students to expand on the core foundation in one of two ways. They may choose to solidify their business knowledge base by exploring six credits of 400-level business courses in the following disciplines: Accounting; Business Administration; Business Law; Energy Business and Finance; Economics; Entrepreneurship; Finance; Financial Services; Health Policy and Administration; International Business; Labor Studies and Employment Relations; Management Information Systems; Management; Marketing; Risk Management; Supply Chain Management; or Statistics. Alternately, students can augment three credits of 400-level coursework in one of the above listed business disciplines with three credits of 400-level work from an approved list of specific business-related course in disciplines such as Communication Arts and Sciences; Corporate Communication; Communications; Criminal Justice; Engineering; English; Human Development and Family Studies; History; Hospitality Management; Information Sciences and Technology; Kinesiology; Philosophy; Political Science; Psychology; Recreation, Park and Tourism Management; or Sociology.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES: (10 credits)

ACCTG 211(4) (Sem: 1-5)

MGMT 301(3), MKTG 301(3) (Sem: 5-8)

ADDITIONAL COURSES: (3 credits)

Select 3 credits from ECON 102 GS(3) or ECON 104 GS(3) (Sem: 1-5)

SUPPORTING COURSES AND RELATED AREAS: (6 credits)

Select 3-6 credits at the 400 level from:

ACCTG, BA, BLAW, EBF, ECON, ENTR, FIN, FINSV, HPA, IB, LER, MIS, MGMT, MKTG, RM, SCM, or STAT (Sem: 5-8)

Select 0-3 credits at the 400-level from:

CAS 404(3), CAS 452(3), CAS 483(3), CC 401(3), CC 403(3), COMM 421W(3), COMM 427(3), COMM 471(3), CRIMJ 408(3), CRIMJ/SOC 467(3), ENGL 419(3), ENGL 420(3), ENGR 425(3), HDFS 401(3), HDFS 424(3), HDFS 425(3), HDFS 455(3), HIST 458(3), HM 435(3), HM 471(3), HM 484(3), IST 402(3), IST 420(3), IST 425(3), IST 431(3), IST 432(3), IST 461(3), KINES 438(3), KINES 492(3), PHIL 406(3), PLSC 440 US:IL(3), PSYCH 404(3), PSYCH 408(3), PSYCH 423(3), PSYCH 482(3), PSYCH 484(3), PSYCH 485(3), RPTM 410(3), RPTM 415(3), RPTM 470(3), SOC 455(3), SOC 456(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-03-174

Review Date: 11/18/2014

UCA Revision #1: 8/3/06

[Comments](#)

AB/BK/UC

Business and the Liberal Arts Minor (BUSLA)

Contact: College of the Liberal Arts, Michael Berkman, mbb1@psu.edu

This minor offers fundamental courses in business, the opportunity for more advanced business courses, and Liberal Arts coursework emphasizing entrepreneurship, ethics, and a range of perspectives on business.

Only courses in which the student earns a grade of C or better may be counted toward fulfillment of the requirements for the minor.

Students pursuing the Minor in Business and the Liberal Arts are encouraged to use ENGL 202D to satisfy their English 202 requirement. ECON 102 (3) is a required prerequisite for some of the business courses.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 25 credits

PRESCRIBED COURSES (13 credits)

ACCTG 211(4) (Sem: 3-8)

BA 301(3), PHIL 119 GH(3), LA 202(3) (Sem: 3-8)

ADDITIONAL COURSES (12 credits)

Select 6 credits from the following course list: BA 302(3) or SCM 301(3), BA 303(3) or MKTG 221 or MKTG 301(3), BA 304(3) or MGMT 100 or MGMT 301(3), BLAW 243(3), COMM 385(3); COMM 424(3); COMM 473(3); COMM 493(3); IB 303 IL(3); LA 495(1-12); LER 100 GS(3); LER 201 GS(3); MGMT 425(3), MGMT 426(3); MKTG 302(3), MKTG 310(3), MKTG 327(3), MKTG 330(3), MKTG 342(3)

Select 6 credits from the following course list:

CAS 403(3); CAS 404(3); CAS 470(3); CAS 475(3); CAS 426W; CAS 450W(3); CAS 452(3); CAS 452W(3); CAS 471 US;IL(3), CRIM 467(3), CRIMJ 460(3), CRIMJ 467(3), ECON 402(3), ECON 410(3), ECON 412(3), ECON 428(3), ECON 433(3), ECON 434(3), ECON 442(3), ECON 443(3), ECON 444(3), ECON 445(3), ECON 463 IL(3), ECON 471(3), ENGL 419(3), ENGL 460(3); FR 409 IL(3); GER 308 IL(3), GER 408 IL(3), HIST 445 US(3), HIST 446 US(3), HIST 447 US(3), HIST 453(3); HIST 458Y(3); HIST 475(3); HIST 481 IL(3), HIST 486 IL(3); JAPNS 403Y IL(4), JAPNS 404 IL(4), LER 400 IL(3), LER 401(3); LER 424(3); LER 425(3); LER 426(3); LER 434(3); LER 437(3); LER 444(3); LER 458Y US(3); LER 460(3); LER 464(3); LER 465(3); PHIL 406(3); PHIL 418(3); PHIL 432(3); PLSC 412(3); PLSC 419(3); PLSC 426(3); PLSC 440 US;IL(3); PLSC 444(3); PLSC 445Y US(3); PLSC 474(3); PSYCH 482(3); PSYCH 484(3); PSYCH 485(3); SOC 420(3); SOC 422(3); SPAN 412(3); SPAN 413(3); SPAN 420(3); WMNST 420 US;IL(3); WMNST 472(3) (Sem: 3-8)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-05-040

Review Date: 2/21/2017

UCA Revision #1: 8/3/06

UCA Revision #2: 7/26/07

Classics and Ancient Mediterranean Studies Minor

University Park, College of the Liberal Arts (CAMS)

The CAMS minor recognizes the completion of a broadly interdisciplinary study of the cultures of the ancient Mediterranean world through 18 credits of course work, including 6 credits at the 400-level. The courses offered are concerned with the cultures of the ancient Near East, Egypt, and Mesopotamia, Greece, and Rome in such fields as civilization, archaeology, history, philosophy, religion, and mythologies. Students who complete the Penn State Athens Education Abroad Program and its prerequisite course may apply to receive the minor. Students in the minor may also receive credit for participating in approved archaeological fieldwork in the Mediterranean region. While the study of language is not required, students are encouraged to study the appropriate ancient languages. The minor is especially suitable for students in such fields as history, medieval studies, anthropology, literature, philosophy, and education.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS: (18 credits)

Select 12 credits from CAMS courses (Sem: 1-8)

Select 6 credits of 400-level CAMS courses (Sem: 5-8)

Last Revised by the Department: Summer Session 2001

Blue Sheet Item #: 29-05-036

Review Date: 11/01

LA

Communication Arts and Sciences Minor (CAS)

Contact: Penn State Abington, Roy Robson, rrr5237@psu.edu; College of the Liberal Arts, Peter Miraldi, pnm10@psu.edu; Penn State York, Dr. Deborah Eicher-Catt, dle4@psu.edu

This minor provides understanding and practice in the ways humans achieve their personal and career goals by means of communication. Students may choose any of the department's pathways of specialization, such as Interpersonal, Family, Intercultural, Organizational, Legal, Political Communication and Presentation Skills, Communication and Technology, or Rhetoric. For example, Legal Communication focuses on communication within the legal system, and provides students with the theory and skills to understand the uses, evaluation, and structure of public policy and legal disputes. Students learn how perception, meaning, and conflict function in human communication if they choose to specialize in Interpersonal Communication, while Organizational Communication critically examines leadership, decision-making, interviewing, and teamwork in formal organizations. In coordination with an adviser, a student of any major may tailor this minor to complement his or her educational and career goals by pursuing a particular pathway.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (6 credits)

Select 3 credits from CAS 203(3), CAS 213(3), CAS 214(3), CAS 215(3), CAS 250(3), CAS 252(3), CAS 271 US;IL(3), CAS 280W(3), or CAS 283(3) (Sem: 3-6)
Select 3 credits from CAS 200(3), CAS 301 GH(3), or CAS 303(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 6 credits of Communication Arts and Sciences courses (Sem: 1-8)

Select 6 credits of Communication Arts and Sciences courses at the 400 level (Sem: 1-8)

Note: CAS 100 GWS(3), CAS 126(3), or CAS 195(1) may not be counted as part of the minor.

Last Revised by the Department: Fall Semester 2002

Blue Sheet Item #: 30-07-104

Review Date: 2/25/05

LA

Computer Engineering Minor

Penn State Erie, The Behrend College (CENBD)

Contact(s): Tom Hemminger, tlh5@psu.edu

This program of study provides graduates with a strong background in computer engineering. Upon completion of the minor, graduates will have developed an understanding of the operation and design of computers. This objective is accomplished through a combination of classroom study, computer-related projects, and laboratory experience. Analysis and design of computer hardware and software systems are stressed. The program requires completion of mandatory courses in analog and digital circuits, microprocessors, transistor logic, and computer programming. Students complete the minor by selecting technical electives in computer hardware and software engineering.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 24 credits

PRESCRIBED COURSES: (11 credits)

EE 210(4) (Sem: 1-4)

EE 310(4), EE 316(3) (Sem: 5-6)

ADDITIONAL COURSES: (13 credits)

Select 3 credits from CMPSC 201 GQ(3) or CMPSC 202 GQ(3) (Sem: 1-4)

Select 4 credits from CMPEN 271(3) and CMPEN 275(1) (Sem: 5-6)

Select 6 credits from CMPEN 352(3), CMPEN 411(3), CMPEN 431(3), CMPEN 441(3), CMPEN 461(3), CMPSC 450(3), CMPSC 479(3), or SWENG 411(3)

Last Revised by the Department: Fall Semester 2001

Reviewed by Publications: 06/23/06

UCA Revision #2: 7/27/07

BD

Chemistry Minor

*Penn State Berks, Ivan Shibley, ias1@psu.edu
University Park, Eberly College of Science (CHEM)*

Contact: Altoona College - Richard Bell, rcb155@psu.edu; Penn State Erie, The Behrend College - Grace Galinato, mig11@psu.edu; Eberly College of Science - Mark Maroncelli, mxm11@psu.edu

The Chemistry minor specifies a series of courses that together provide a broad introduction to the main thrusts of modern chemistry; general, organic, and physical. The Chemistry minor includes substantial laboratory work including general chemistry and either organic or physical chemistry. In addition, several advanced courses chosen by the student from a list of options are required.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 26-28 credits

PRESCRIBED COURSES: (16 credits)

CHEM 110 GN(3), CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), CHEM 210(3), CHEM 212(3), CHEM 213(2) (Sem: 1-4)

ADDITIONAL COURSES: (10-12 credits)

Select 4 credits from CHEM 227(4) or 6 credits from CHEM 450(3) or CHEM 466(3) and CHEM 452(3)(Sem: 3-8)

Select 6 credits from 400-level CHEM not used above and excluding CHEM 494(1-10), CHEM 494H(1-10), CHEM 495(1-18), and CHEM 496(1-18) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2018

Blue Sheet Item #: 46-05-065

Review Date: 2/20/2018

UCA Revision #1: 9/20/06

SC

Child Maltreatment and Advocacy Studies Minor

Intercollege Program (CMAS)

Erica Lunkenheimer, Professor-in-Charge,

The Inter-college minor in Child Maltreatment and Advocacy Studies is designed for students who wish to supplement their academic majors with studies in child protection and well-being. The minor provides students with a broad and interdisciplinary introduction to child maltreatment and serves to establish foundational knowledge of the history and etiology of child maltreatment, the structure and administration of child protective service systems, and the identification, investigation, treatment, and prevention of child maltreatment. Students completing this minor will have an understanding of the issues surrounding child maltreatment and advocacy and will be better prepared for professions across a variety of settings that serve children. To meet a diverse range of student interests, four core courses (12 credits) establish foundational knowledge in child maltreatment and advocacy and two elective courses (6 credits) offer opportunities for students to select course options aligned with their professional goals. A capstone course involving field work, research, or other relevant work is required.

For a minor in Child Maltreatment and Advocacy Studies a minimum of 18 credits are required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENT FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

CMAS 258(3), CMAS 465(3), CMAS 466(3), CMAS 493(1-3)

SUPPORTING COURSES AND RELATED AREAS (5-6 credits)

Select 6 credits from BBH 146 GHA(3), BBH 301(3), BBH 446(3), CNED 422(3), CNED 431(3), CRIM 12 GS(3), CRIM 422(3), CRIM 423(3), CRIM 441(3), EDPSY 10(3), HDFS 129 GS(3), HDFS 229 GS(3), HDFS 239 GS(3), HDFS 432(3), HDFS 453(3), HDFS 455(3), NURS 111(4), NURS 230(4), NURS 245(3), NURS 409(3), PSYCH 270(3), PSYCH 243 GS(3), PSYCH 231 GS(3), PSYCH 436(3), PSYCH 476(3), PSYCH 421, RHS 300(3), RHS 301(3), RHS 401(3), RHS 402(3), RHS 400(3), SOC 5 GS(3), SOC 430(3) (Sem: 5-8)

Last Revised by the Department: Spring 2015

Blue Sheet Item #: 43-06-076A

Review Date: 4/14/2015

Chinese Language Minor

University Park, College of the Liberal Arts (CHNS)

The Chinese Language minor is intended to provide students with a good working knowledge of the Chinese language, taught in a context that emphasizes the characteristics and diversity of Chinese culture and society. Students undertake three years of language study (or equivalent); education abroad can be included.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (8 credits)

CHNS 002(4), CHNS 003(4) (Sem: 1-4)

ADDITIONAL COURSES: (10 credits)

Select 4 credits from CHNS 110 IL(4) or CHNS 296(1-18), CHNS 297(1-9), CHNS 299 IL(1-12) (Sem: 1-8)

Select 6-8 credits from CHNS 401 IL(4), CHNS 402 IL(4), CHNS 403(4), CHNS 404(4), CHNS 410 IL(3), CHNS 411 IL(3), CHNS 415 IL(3), CHNS 416 IL(3), CHNS 417 IL(3), CHNS 424(3), CHNS 419 IL(3), CHNS 452 IL(3), CHNS 453 IL(3), CHNS 454 IL(3), CHNS 455 IL(3), CHNS 496(1-18), CHNS 497(1-9) or CHNS 499 IL(1-12) (Sem: 5-8)

Lasted Revised by the Department: Summer Session 2014

Blue Sheet Item #: 43-01-067

Review Date: 08/19/2014

LA

Civic and Community Engagement Minor

College of the Liberal Arts (CIVCM)

University Park - Rosa Eberly, rae2@psu.edu (Coordinator of the program)

Penn State Abington - Gary Calore, gsc1@psu.edu

Penn State Brandywine - Lynn Hartle, lch1@psu.edu

Penn State Erie - Dawn Blasko, dqb6@psu.edu

Penn State Greater Allegheny - Michael Vicaro, mpv2@psu.edu

Penn State Beaver - JoAnn Chirico, jxc64@psu.edu

Penn State Lehigh Valley - Mary Hutchinson, mcl6@psu.edu

Penn State Schuylkill - Elinor Madigan, emm17@psu.edu

Penn State Mont Alto - Jacqueline Schwab, sen@psu.edu

Penn State Berks - Laurie Grobman, leg8@psu.edu

Administered by a program faculty drawn from across the University, the Intercollege Minor in Civic and Community Engagement is appropriate to undergraduate students seeking to apply domains of knowledge from their majors or General Education programs to issues of consequence beyond the classroom. In the minor students integrate democratic, professional, and creative development. In particular, the minor serves to encourage, recognize, and systematize student participation in public service or problem-based fieldwork and research that:

- is substantial, sustained, and includes structured opportunities for student reflection and critical assessment; and
- is integrated with and supported by traditional, classroom-based course work.

Specifically, the minor consists of a balanced program of fieldwork experience and supporting course work that is selected with the advice and consent of a minor adviser and approved on behalf of the minor by a program faculty. Fieldwork experiences are selected from a list of eligible courses (or approved comparable alternatives), and supporting course work includes a conceptual foundations course that provides students with a critical orientation to contemporary issues and themes in public scholarship. The minor culminates with an approved capstone project, which may be a significant paper, or annotated portfolio, or other demonstration of substantial assessment and integration of the minor experience and the broader issue of application of academic theory and practice in the civic community.

The Civic and Community Engagement Minor Committee is authorized to award a minor certificate to any undergraduate who, in addition to satisfying the degree requirements of his or her baccalaureate major, satisfies the requirements for the Civic and Community Engagement Minor. The completion of the minor is reflected by a formal notation of the student's official record at the time of graduation. To enter the program, a student must submit an application to the committee. Applicants to the minor in Civic and Community Engagement:

- Must have a minimum overall GPA of 2.0.
- Must present a proposed plan of study in the application process. The plan of study should include student's contact information and GPA, a brief statement of student's learning objectives in connection with the major or other proposed curricular concentration, such as minor or general education, proposed supporting courses (include description of course and syllabus if available), proposed fieldwork courses (include information about fieldwork, supervision, and reflection and assessment), and minor adviser endorsement of the plan. Minor proposals must be approved by the student's minor adviser and the committee.
- May apply no more than 9 credits toward the minor that also count toward the major. Students with multiple majors may have some additional flexibility. Past fieldwork experiences and completed courses may be retroactively included in the plan of study, but must be approved by the minor adviser and the committee.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

CIVCM 211 GS(3) (Sem: 5)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

at least 6 credits must be taken at the 400 level

Select 6-9 credits from Program List of public scholarship courses, of which at least 3 credits involve supervised field experience and of which 3-6 credits are public issues and democracy courses, or equivalents chosen in consultation with minor adviser (Sem: 5-8)

Select 3-6 credits in related areas in consultation with minor adviser (Sem: 5-8)

Select 3 credits of public scholarship capstone work at the 400 level in consultation with minor adviser (Sem: 7-8)

Last Revised by the Department: Summer Session 2007

Blue Sheet Item #: 35-04-233

Review Date: 1/16/07

UE

Criminal Justice Minor

Abington College (CJ) contact: Patricia Collins, pxc36@psu.edu

Altoona College (CJ)

Penn State Beaver contact: Mari Pierce, mbp16@psu.edu

Penn State Berks - Jennifer Murphy

Penn State Fayette (CJCC)

Penn State Harrisburg contact: Shaun Gabbidon, slg13@psu.edu

Penn State New Kensington contact: Jeffrey Roth, jjr30@psu.edu

Penn State World Campus

The Criminal Justice minor provides an overview of the criminal justice system and a thorough grounding in criminological theory. Students receive an in-depth look at the three main system components: policing, courts, and corrections, as well as the opportunity to delve into two or more specialized topics relating to criminal justice. The minor is designed not only for students who have a professional interest in criminal justice, but also for those who want to be informed members of the voting citizenry. A functional understanding of crime and the criminal justice system is useful in many careers, including law, social work, education, and journalism.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (12 credits)

CRIMJ 100(3) (Sem:1-4)

CRIMJ 210(3), CRIMJ 220(3), CRIMJ 230(3) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS: (6 credits)

Select 6 credits of 400-level CRIMJ courses, excluding CRIMJ 495(1-18) (Sem: 7-8)

Last Revised by the Department: Fall Semester 2001

UCA Revision #2: 7/27/07

AL

Climatology Minor

University Park, College of Earth and Mineral Sciences (CLIMA)

Climate is a central component of the physical environment, playing an important role in a wide range of human activities. The ability to force changes in the global climate system may be one of the more significant ways in which human society will impact Earth's physical environment in the near future. The climatology minor in the College of Earth and Mineral Sciences is an interdisciplinary program drawing from the fields of meteorology, geography, and geosciences. The minor provides an overview of the physical processes that control present-day climate. It also provides an introduction to the history of climate change through geologic time, and presents some of the causes and consequences of potential future climate change and variability.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (18 credits)

Select 18 credits from:

EARTH 103 GN(3) (Sem: 1-8)

GEOG 438W(3), GEOG 412(3), GEOG 310(3), GEOG 417(3), GEOSC 320(3), METEO 300(3) (Sem: 5-8)

Last Revised by the Department: Summer Session 2000

Blue Sheet Item #: 28-05-015

Review Date: 8/5/03

EM

Crime, Law, and Psychology

Penn State Erie (CLWPS_UMNR)

Contact: [Robert Speel, rws15@psu.edu](mailto:Rws15@psu.edu); [Nicole Shoenberger, nas25@psu.edu](mailto:Nas25@psu.edu)

The Crime, Law, and Psychology (CLP) minor is a multidisciplinary minor that offers a broad overview of the causes of crime, an understanding of the criminal justice system, and an awareness of how public policy influences criminal law. Classes will provide in-depth understanding of both sociological and psychological causes of criminal behavior, the psychological analysis of crime, the legal process, and policy-making. Students will have flexibility in choosing classes in three domains: Criminology, Psychology, and Political Science. This minor is designed for students with interest in learning about criminal behavior, the causes of criminal behavior, criminal investigation, and the legal system. PSYCH 100 is a pre-requisite for all other PSYCH courses. PL SC 001 and PL SC 014 are pre-requisites for some of the PL SC courses in the minor.

For the MINOR in Crime, Law, and Psychology a minimum of 18 credits is required.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)
SOC/CRIM/CRIMJ 012 GS(3) (Sem: 1-4)

ADDITIONAL COURSES (6 credits)
PSYCH 445(3); PSYCH 473(3); PSYCH 476(3), PL SC 471(3); PL SC 472(3); PL SC 482(3); PL SC 487(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 1 course from the Supported Courses of Criminal Justice, Criminology, and Sociology courses (3 credits) (Initial approved list)
SOC/CRIMJ 013 GS(3)
SOC/CRIMJ/CRIM 406 (3)

Select 1 course from the Supported Courses Psychology Courses (3 credits) (Initial approved list)
PSYCH 221 GS(3); PSYCH 232 GS;US;IL(3); PSYCH 238 GS(3); PSYCH 270(3); PSYCH 414(3); PSYCH 438(3); PSYCH 442(3); PSYCH 445(3); PSYCH 473(3); PSYCH 476(3)

Select 1 course from the Supported Courses of Political Science Courses (3 credits) (Initial approved list)
PL SC 002(3); PL SC 123 GS;US;IL(3); PL SC 177 GS(3); PL SC 419(3); PL SC 439(3); PL SC 482(3); PL SC 489(3); PL SC 178(3); PL SC 471(3); PL SC 472(3); PL SC 473(3); PL SC 487(3)

Lasted Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-031

Review Date: 08/23/2016

Communications Minor

Altoona College (COMAL)

The Communications minor provides students an academic program of media studies that introduces them to approaches used to understand the mass media. These include aesthetic, cultural, humanistic, social-behavioral, and legal approaches. Students in the minor will have an opportunity to examine the theory and principles of communications systems and processes as well as learn in the advanced courses the research methods used for their systematic analysis. The minor emphasizes the liberal arts core of the Communications program and will equip students with well-developed language and analytical skills.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

COMM 100 GS(3), COMM 150 GA(3) (Sem: 1-2)

ADDITIONAL COURSES (12 credits)

(At least 6 credits must be at the 400 level.)

COMM 180 GS(3), COMM 205 US(3), COMM 250 GA(3), COMM 261 GH(3), COMM 320(3), COMM 370(3) (Sem: 3-4)

COMM 401(3), COMM 403(3), COMM 408(3), COMM 409(3), COMM 411(3), COMM 413W(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2002

Blue Sheet Item #: 30-07-022

Review Date: 1/14/03

AL

Communications Minor

Capital College (COMCL)

The Communications minor provides students with an introduction to the tool skills needed to function as a professional communicator, as well as a basic understanding of communication processes and theory. Students seeking careers in fields such as public administration, business, criminal justice, law, information technology, and the medical, social and behavioral professions will find this minor provides instruction in a valuable additional knowledge and skill area important in today's information society.

Students must apply for entrance to the minor after achieving fifth semester classification.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

COMM 251(3) (Sem: 3-6)

ADDITIONAL COURSES (3 credits)

COMM 230(3) (Sem: 3-6)

SUPPORTING COURSES (12 credits)

Select 12 credits from approved department list. At least 6 of these credits must be at the 400-level (Sem: 2-8)

Last Revised by the Department: Fall Semester 2005

Blue Sheet Item #: 33-06-043

Review Date: 04/12/05

UCA Revision #2: 7/27/07

CL

Communication Arts and Mass Media Minor

Penn State Erie, The Behrend College (CASCM)

Contact(s): Rod Troester, rlt5@psu.edu

The CASCM minor offers students the opportunity to balance a liberal arts foundation and orientation to communication with the media and production theory and skills necessary for supplementing career fields requiring effective oral, written and media production skills. This minor would complement majors in management, marketing, education, sales, training and development, government, human resources, and development.

Students must apply for entrance to the minor after achieving fifth semester classification. This minor is not available to students enrolled in any of the majors in the College of Communications or any other communication major including: CAS, CASBL, CASCC, CCBA, CCCC, COMAL, COMBA, COMCC, or COMCL.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (6 credits)

Select 3 credits from COMM 100 GS(3), COMM 110 GH(3), COMM 118 GS(3), COMM 150 GA(3), or COMM 251(3) (Sem: 1-2)

Select 3 credits from CAS 101 GS(3), CAS 201 GH(3), CAS 202 GS(3), or CAS 252(3) (Sem: 1-2)

SUPPORTING COURSES AND RELATED AREAS: (12 credits)

Select 6 select credits from any CAS or COMM 200-300 level courses. (Sem: 3-6)

Select 6 credits from any CAS or COMM 400 level courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-02-009

Review Date: 10/08/2013

UCA Revision #2: 7/27/07

BD

Computer Science Minor

Computing has become an essential component of many disciplines, and it is driving innovation in fields far beyond computer science. The minor in Computer Science at Penn State Harrisburg provides basic proficiency in computer science, with an emphasis on building both a theoretical framework for computer science and providing practical skills needed to apply computer science to other fields of study. The knowledge and skills gained in the minor expands opportunities for students seeking careers in the growing number of fields that require a strong foundation in computer science. In addition, for students seeking to pursue graduate study, the minor provides background knowledge for the computing intensive aspects of their chosen discipline.

The minor begins with the second-level course in computer programming (CMPSC 122), a course in object-oriented programming with web applications (CMPSC 221), a course in discrete math for computer science (CMPSC 360), and a course in data structures (CMPSC 463). These twelve credits are followed with an additional six credits of 400-level work in computer science (CMPSC). Note that CMPSC 121 and MATH 140 are prerequisites for CMPSC 122.

Capital College (COMP)

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

CMPSC 122(3) (Sem: 1-3)

CMPSC 221(3) (Sem: 4-5)

CMPSC 360(3), CMPSC 462(3) (Sem:4-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of 400-level CMPSC courses from the department list of approved Additional Courses (Sem: 5-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-05-051

Review Date: 02/19/2013

UCA Revision #1: 8/3/06

UCA Revision #2: 7/27/07

CL

Computer Science Minor

Penn State Erie, The Behrend College (CSCBD)

Contact(s): Meng Su, mus11@psu.edu

The computer science minor at Behrend establishes a strong conceptual framework in computer science for students in other majors, so they can apply computer science methods and techniques to their primary field of study. The minor begins with the second level course in computer programming (CMPSC 122), the choice of a course in Object-Oriented Web based programming or design (CMPSC 221 or SWENG 311), a course in discrete math for computer science (CMPSC 360), and a course in Data Structures and Algorithms (CMPSC 465). These twelve credits are followed with an additional six credits of 400-level work in computer science (CMPSC). (Please note that CMPSC 121 and MATH 140 are prerequisites for CMPSC 122.)

Computing has become a critical aspect of most disciplines. This minor provides students with the opportunity to develop computing expertise which can then be applied to their field of study, thus enhancing job placement opportunities after graduation or better preparing the student to pursue graduate work in computing intensive sub-disciplines of their major. The emphasis is on building a conceptual framework which will allow the student to continue to learn new computing techniques beyond graduation in this rapidly evolving discipline.

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

CMPSC 122(3) (Sem: 2-4)

CMPSC 360(3), CMPSC 465(3) (Sem: 3-6)

ADDITIONAL COURSES (3 credits)

Select 3 credits from CMPSC 221(3), CMPSC 312 (3), or SWENG 311(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of 400-level (below 490) CMPSC courses (Sem: 7-8)

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-03-012

Review Date: 11/08/2011

UCA Revision #2: 7/27/07

BD

Creative Writing Minor

Contact: Charlotte Holmes, cxh18@psu.edu

Abington College, Penn State Altoona, Behrend College, Berks College, Capital College, University Park - Liberal Arts, University College (CWRIT_UMNR)

This minor offers students not majoring in English the opportunity to explore different forms of creative writing--fiction, poetry, and nonfiction--or to focus primarily on one of them. Students receive instruction and practice the art and craft of writing in small, workshop courses.

A grade of C or better is required for all courses in the minor.

Some courses may require prerequisites.

For a Minor in Creative Writing, a minimum of 18 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (18 credits)

Select 6 credits of introductory-level courses (200-level): ENGL 212(3); ENGL 213(3); ENGL 214(3); ENGL 215(3); ENGL 281(3) (Sem: 1-4)

Select 12 credits of advanced -level writing workshop courses (400-level): ENGL 411 WAC(3-12); ENGL 412(3); ENGL 413(3); ENGL 414(3); ENGL 415(3); ENGL 422(3); ENGL 425(3); ENGL 401(3); ENGL 424(3); ENGL 429(3); ENGL 435(3); ENGL 436(3); ENGL 437(3); ENGL 439(3); ENGL 486 IL(3); ENGL 495(3-12) (Sem: 5-8)

Blue Sheet Item #: 45-05-041

Review Date: 2/21/17

Dispute Management and Resolution Minor

University Park, College of the Liberal Arts (D M R)

This interdisciplinary minor is administered by the Departments of Communication Arts and Sciences and the School of Labor and Employment Relations. It has as specific learning objectives (1) the development of skills appropriate to the management and resolution of problems created by difference in attitudes, beliefs, values, and behavioral preferences of individuals and (2) learning how to apply these skills across multiple contexts, including interpersonal, group, and organizational contexts, and, to a lesser extent, international contexts. The minor is supportive of, and complementary to, work emphasizing conflict and means for dealing with it in such majors as Communication Arts and Sciences, Criminology/Criminal Justice, Human Development and Family Studies, Labor and Employment Relations, Political Science, Psychology, and Sociology. Students pursuing the minor must complete 9 credits of prescribed course work and 9 credits of additional course work distributed across at least two of the eight areas identified below. Of the 18 credits selected, at least 9 must be at the 400 level, 6 must be from Communication Arts and Sciences, and 6 must be from Labor and Employment Relations. A maximum of 6 credits earned in the minor, if appropriate, can be used to satisfy requirements in the Communication Arts and Sciences or Labor and Employment Relations majors. Only courses in which the student earns a grade of C or better may be counted toward fulfillment of requirements for the minor.

Some courses may require other course works as some courses have prerequisites.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

CAS 203(3), LER 100 GS(3) (Sem: 3-6)

ADDITIONAL COURSES (12 credits)

(Select 12 credits of which 9 credits must be taken at the 400 level)

Select 3 credits from LER 437(3) or CAS 404(3) (Sem: 5-8)

Select 9 credits from CRIM/CRIMJ/WMNST 423 US(3), CAS 250(3), CAS 403(3), CAS 452(3), CAS 471 US;IL(3), HDFS 311(3), HDFS 414(3), LER/WMNST 136 US(3), LER 434(3), PLSC 14 GS;IL(3), PLSC 418(3), PLSC 437(3), PSYCH 281 GS(3), PSYCH 423(3), PSYCH 484(3), SOC 119 GS;US(4), SOC 403(3), SOC 432(3), SOC 455(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-105

Review Date: 8/23/16

UCA Revision #1: 8/3/06

LA

Disability Studies Minor

Intercollege Program (DBLTY)

This is an intercollege minor, offered jointly by the College of Engineering and the College of the Liberal Arts, and overseen by the Science, Technology, and Society (STS) Program. It is designed for students with special interests in the social systems, environmental factors, and cultural history of disability. In addition to the requirements of the student's major department, the minor consists of 18 credits selected from several colleges and departments. For those majoring in disability-driven disciplines (e.g. nursing, speech and communication disorders, psychology, special education, rehabilitation and human services, health administration), a Disability Studies minor provides relevant interdisciplinary links that broaden the understanding of disability beyond the clinical realm. For students in the humanities (e.g. history, philosophy, political science, and literature), Disability Studies offers important new dimensions and challenges to traditional accounts of human value and political agency. For students with personal experience of disability, the minor provides an academic grounding and community for disability advocacy on personal, community, and national levels.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

RHS 100(3), ENGL 228 GH;IL(3) (Sem: 1-6)

ADDITIONAL COURSES (3 credits)

Select 3 credits from LA 495(1-12), or an equivalent independent research course or internship approved by the faculty member in charge.

SUPPORTING COURSES AND RELATED AREAS: (9 credits)

Select at least three courses for at least 9 credits from an approved department list in consultation with adviser.

Last Revised by the Department: Fall Semester 2008

Blue Sheet Item #: 36-06-085

Review Date: 4/15/08

EN/LA

Deafness and Hearing Studies Minor

University Park, College of Health and Human Development (DHS)

Contact: Joel Waters, joelwaters@psu.edu

This interdisciplinary minor is designed for students who want to learn about individuals with hearing disabilities, audition, and deafness within an individual and societal context. Core courses include knowledge and skills in preventing hearing loss, basic communication skills and disabilities, history, thought and culture of individuals who are deaf, and principles of human behavior and their applications. The minor will assist students in recognizing relationships among hearing disability, deafness, cultural differences and their impact on the individual in educational, social and vocational settings. Specializations include, but are not limited to, health-related fields, communications, societal and social life, cultural impact, educational experiences, prejudice and discrimination, and rehabilitation. Students will be able to place deaf culture and hearing disabilities in the proper perspective necessary for life-long learners engaged in fostering climates which embrace individuals from diverse backgrounds, especially disabilities.

The minor is most appropriate for students interested in clinical and health-related fields (e.g., nursing, biobehavioral health, or medicine), professional fields (e.g., business, pre-law, or communications), social sciences (e.g., human development and family studies, sociology, or psychology), and education (e.g., early childhood education, special education, rehabilitation counseling), as it will provide students with exposure to the range of variation in persons with hearing disabilities and deafness across the lifespan.

Students from any major (except Communication Sciences and Disorders) can declare a minor in Deafness and Hearing Studies. A grade of C or better is required for all courses in the minor. Students seeking advising for this minor should contact the Department of Communication Sciences and Disorders.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

CSD 146 US;IL(3), CSD 269 US;IL(3), PSYCH 100 GS(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

(Some courses in this category have prerequisites that are not required in the minor.)

(At least 6 credits must be at the 400 level.)

COMM 408(3), COMM 411(3), CSD 218(3), CSD 230(3), CSD 341(3), CSD 331(3), CSD 433(3), CSD 451(3), CSD 495B(3), CSD 496(3), EDPSY 10 GS(3), HDFS 129 GS(3), HDFS 417 US;IL(3), KINES 400(3), NURS 401(3), NURS 452(3), PSYCH 253 GS(3), PSYCH 420(3), PSYCH 432 US(3), PSYCH 441(3), PSYCH 476(3), RPTM 277 US(3), RHS 300(3), RHS 403(3), SOC 1 GS(3), SOC 3 GS(3), SOC 429(3), SOC 430(3), SPLED 400(3), SPLED 425(4) (Sem: 1-8)

Lastest Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-066

Review Date: 08/23/2016

UCA Revision #1: 8/20/06

HH

Diversity and Inclusion in Health and Human Development

University Park, Health and Human Development (DIHHD_UMNR)

The Diversity and Inclusion in Health and Human Development helps students explore and understand the impacts racial, ethnic, socioeconomic status, and cultural diversity have in the world of health care, education, hospitality, recreation, and tourism.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (6 credits)

Select 6 credits from: KINES 100(3); NUTR 251 GHW(3); RPTM 120 GS;US;IL(3); CSD 146 US;IL(3); HM 201(3); HPA 101(3); BBH 101 GHW(3); HDFS 129 GS(3)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Choose 12 credits from one of the following clusters. At least 6 credits must be at the 400 level and at least 3 credits outside of your major:

Global Health Diversity and Inclusion: HPA 410 IL(3); NUTR 425 IL(3); RPTM 300 IL(3); BBH 302 US(3); BBH 305 IL(3); BBH 402 IL(3); BBH 407 IL(3); BBH/HPA 440 US;IL(3)

Health and Identity: BBH 251 US(3); BBH 302 US(3); BBH 315 US(3); BBH/NURS/WMNST 452 US(3); CSD 269 GS;US;IL(3); KINES/WMNST 424 US(3); HDFS/WMNST 250 US(3); HDFS 405 US(3)

Work, Recreation, Family and Community: RPTM 277 US(3); NUTR 456 US(3); HM 466 US(3); HDFS 315 US(3); HDFS 424 US(3); KINES 341 US(3)

Lasted Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-077

Review Date: 8/22/2017

Digital Media Trends and Analytics Minor

University Park, Donald P. Bellisario College Of COMMUNICATIONS (DMTA)
University Park, College Of INFORMATION SCIENCES AND TECHNOLOGY

LEE AHERN, ASSOC PROF COMMUNICATIONS
CARLEEN MAITLAND, Associate Professor IST

The DMTA minor will provide students with contextualized understanding of practices and trends in digital media, advertising, marketing and public relations. The minor is needed to provide a viable academic option for students who want to specialize in this fast-growing sector of the communications industry. In addition, completion of the minor will prepare students to pass a number of leading industry certification tests related to analytics, search, social media and digital media sales and marketing. The course sequence will begin with required basic courses in both IST (IST 110; 3 credits) and COMM (COMM 320 or 370; 3 credits) to ensure students have the foundational information they for the material that follows, and the ability to relate practices and trend in digital media to the larger communication and information technology landscapes. Students will then explore more focused courses in digital media, advertising, marketing and public relations. These areas reflect the major areas of digital communications activity. The digital media analytics course (3 credits) will lay the groundwork in audience the traffic measurement as well as detail the specifics of digital media system types and technologies. The search engine marketing class (3 credits) provides in-depth experience with the largest online advertising platform—Google Adwords. This course also makes connections to media analytics (also a central part of the Google marketer platform) and social media. The digital public relations class (3 credits) will focus on non-paid digital activities, most importantly social media applications such as Twitter, Facebook, Instagram and Google+, and how these activities can be successfully integrated into a communications campaign. The digital advertising class (3 credits) will review new trends in the programmatic buying and selling of advertising outside of search engine marketing. Of specific interest are new developments in content marketing real-time auctions, and other platforms that bring together content providers and advertisers in an increasingly automated marketplace. This course sequence is designed to easily accommodate new and related digital courses and to complement existing courses in advertising/public relations, telecommunications, information technology, marketing and media.

For the minor in Digital Media Trends and Analytics (DMTA) a minimum of 18 credits are required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (15 credits) [\[1\]](#)
COMM 310(3), COMM 372(3), COMM 450B(3), IST 110 GS(3), IST 450A(3) (Sem: 4-8)

ADDITIONAL COURSES (3 credits)
Select 3 credits from: COMM 320(3); COMM 370(3)(Sem: 3-4)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

Dance Studies Minor

Altoona College (DNCA)

The Dance Studies Minor is designed for students interested in furthering their study and exploration of the many areas of dance. Students will explore the creative process of dance as it relates directly to technique and performance. Students have the opportunity to perform with the Ivyside Dance Ensemble, perform in faculty choreography, choreograph for productions, and attend national festivals. The Dance Studies Minor allows students to further enhance their dance study and prepares them for graduate study and a variety of career options. Twenty-one credits are required for completion of the minor with a minimum of 9 credits at the 400 level.

A grade of C or better is required in all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (18 credits)

DANCE 270 GHA(3)

DANCE 365(3), DANCE 366(3) (Sem: 3-6)

DANCE 466(3), DANCE 472(3), DANCE 410 US;IL(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)

DANCE 230 GA(1.5), DANCE 240 GA(1.5), DANCE 250 GA(1.5), DANCE 261 GA(1.5) (Sem: 1-4)

(All Dance Studies minor students are required to demonstrate proficiency at beginning level technique courses before placement in the intermediate or advanced courses.)

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-04-007

Review Date: 01/10/2012

AL

Engineering Mechanics Minor

University Park, College of Engineering (E MCH)

The Engineering Mechanics minor helps students prepare to analyze and/or design simple structures that are efficient and safe under foreseen loading conditions.

Contemporary engineering design of mechanical components requires precise information and modern analysis techniques to determine material response to anticipated loading. Designers must have the analytical and experimental tools to accurately define deformation under load to characterize dynamic response and to prevent mechanical failure. In the event of failure the cause(s) must be ascertained to prevent future failure through redesign and/or material substitution. Thus, industry has a real need for those with a sound foundation in Engineering Mechanics, the engineering science that deals with the effects of forces and torques on rigid and deformable bodies. Engineering Mechanics consists of Statics (bodies in equilibrium), Dynamics (bodies in unsteady motion such as vibration, moving on curvilinear paths) and the Mechanics of Deformable Media. The latter topic covers the change in dimensions of bodies of various shapes under the influence of forces, torques, temperature, and dynamic motion. Further failure criteria under such loadings are introduced and utilized in examples of engineering design. Some twenty undergraduate courses covering the above topics are available at two levels, i.e. sophomore introductory and senior (400) courses.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS: (18 credits)

Select 12 credits of EMCH courses, which may include: EMCH 211(3), EMCH 212(3), EMCH 213(3), EMCH 315(2), EMCH 316(1) (Sem: 1-4)

Select 6 credits from 400-level EMCH courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

Review Date: 8/29/02

EN

Electronic and Photonic Materials Minor

University Park, College of Earth and Mineral Sciences (EPM)

Electronic and photonic materials have greatly changed modern life. Without them, computers, telecommunication systems, compact disc players, video cameras, and all the electronics with which we have become accustomed would not be possible. The study of electronic and photonic materials is a natural bridge between the fields of electrical engineering and material science. Students in electrical engineering will benefit from this minor because they will better understand the materials with which they will design electronic and photonic devices, such as transistors on a computer chip or semiconductor lasers in a compact disc player. Training in the field of electronic and photonic materials requires study of the processing and characterization of these materials to help engineers develop ways to lower cost and improve performance. This knowledge will help prepare students to enter the semiconductor industry or pursue graduate studies.

A grade of C or better is required for all courses in the minor.

For a MINOR in Electronic and Photonic Materials a minimum of 35 credits are required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 35 credits

PRESCRIBED COURSES (23 credits)

EE 310(4), MATH 140(4), MATH 141(4), MATH 231(2), MATSE 201(3) (Sem: 1-4)

CHEM 112 GN(3), EE 441(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 3 credits from ESC 314(3) or an approved EE course (Sem: 1-4)

Select 3 credits from MATSE 450(3) or MATSE 455(3) (Sem: 5-8)

Select 6 credits from EE 442(3), ESC 445(3), MATSE 400(3), MATSE 401(3), MATSE 402(3), MATSE 413(3), MATSE 417(3), MATSE 430(3), MATSE 435(3), MATSE 450(3), MATSE 455(3) (Sem: 5-8)

Last Revised by the Department: Fall 2015

Blue Sheet Item #: 44-03-029

Review Date: 11/17/15

UCA Revision #2: 7/27/07

EM

Environmental Resource Management Minor

University Park, College of Agricultural Sciences (E R M)

The Environmental Resource Management (E R M) minor is designed to provide science-based non-majors with a cohesive selection of courses related to the sustainable management of environmental resources.

The minor was developed to permit students from other majors to have their environmental interests and training formally documented on their academic records. Because so many of society's activities have an impact on environmental quality, the minor should appeal to students with majors from a wide variety of science-based disciplines.

The E R M minor includes an introduction to calculations and problem-solving skills common to managing environmental resources, and allows students to select a wide variety of other E R M courses that cater to their strengths and interests. Students may also elect to take courses in environmental law, resource allocation and economics, and soil sustainability and management. Individual programs are determined jointly by the student and the E R M Program Coordinator.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (18 credits) [\[1\]](#)

Select 18 credits from ASM 327(3), SOILS 101 GN(3), or any ERM course. At least 6 credits must be at the 400-level (Sem: 3-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

AG

Environmental and Renewable Resource Economics Minor

University Park, College of Agricultural Sciences (E RRE)

This minor introduces students to how fundamental economic principles can be used to explain and seek solutions for problems related to the degradation of the environment and unsustainable use of natural resources. This program complements majors that provide a natural science-based approach to environmental issues and provides social-science majors interested in the environment with additional tools for the analysis of social decision-making, and policy objectives. A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

CED 201(3), CED 429(3), ECON 302 GS(3) (Sem: 5-6)

ADDITIONAL COURSES (9 credits)

Select 9 credits from CED 431(3), ECON 428(3), CED 450 IL(3), ERM 411 (3), 300- or 400-level internship or independent study (3 credit max.) (Sem:5-8)

Last Revised by the Department: Summer Session 2004

Blue Sheet Item #: 30-04-001

Review Date: 01/15/02

AG

Earth and Sustainability

College of Earth and Mineral Sciences (EASUS)

By the time current undergraduates send their children to college, Earth's population will have increased to more than eight billion people. One or more metropolitan areas in our increasingly crowded world will have experienced a devastating earthquake or volcanic eruption, sea level rise will be inundating low-lying coastal cities such as Jakarta along with whole island nations, energy resources will be less available and more expensive, and our climate will be warmer and characterized by more frequent extreme weather events. How we choose to plan for and attempt to mitigate these "grand challenges" will have consequences for individuals, nations, and our global socioeconomic and political systems.

Personal and collective actions are needed to ensure the sustainable use of our natural resources and environmental systems-land, air, and water-in an ethical and responsible manner. The United States needs to build robust educational pathways for its citizenry to develop the global perspective, cultural sensitivity, economic wisdom, and scientific acumen to inform their actions and address these grand challenges. The geosciences (marine, Earth, and atmospheric sciences) that explain the workings of the Earth system provide critical insight into all of these challenges and, consequently, must be firmly integrated into those educational pathways. These programs seek to promote that integration through engaging the geoscience community and their colleagues in allied disciplines in the development of high-quality educational materials, and mechanisms by which these materials can be effectively brought to large numbers of students.

The goal of this minor is to dramatically increase geoscience literacy of undergraduate students, including the large majority that do not major in the geosciences, and especially adult learners through the on-line program, such that they are better positioned to make sustainable decisions in their lives and as part of the broader society.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (6 credits)

EARTH 103(3)

EARTH 402(3)

ADDITIONAL COURSES (9 credits)

Select 9 credits from: EARTH 104 (3), EARTH 111(3), EARTH 107(3), GEOG 3N(3)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits from the approved list of EMS courses. Approved courses are:

EGEE 401(3), EME 444(3), EME 460(3), GEOG 412(3), GEOG 430(3), GEOG 431(3), GEOG 432(3), GEOG 438W(3), GEOG 469(3), GEOSC 402(3), GEOSC 451(3), GEOSC 452(3), METEO 469(3)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-03-017

Review Date: 11/15/2016

Earth Systems Minor

University Park, College of Earth and Mineral Sciences (EASYS)

The recognition that environmental problems are global in extent, and impact on many different components of the Earth System simultaneously, requires that we adopt a large-scale and interdisciplinary approach to questions of global change and the interactions of the physical and human environments. The Earth Systems minor follows such an approach and offers undergraduates the opportunity to study the Earth as an integrated system. The Earth Systems minor is a science minor offered through the College of Earth and Mineral Sciences. It provides a wider interdisciplinary perspective for majors in the traditional Earth Science disciplines (geography, geoscience, and meteorology), and provides an introduction to Earth Sciences and a broad exposure to Earth Systems/Environmental Studies for other science and engineering majors. Students may apply up to 6 credits from courses in the major department to satisfy the minor requirements.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENT FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

EARTH 2 GN(3) (Sem: 3-6)

ADDITIONAL COURSES (6 credits)

Select 6 credits from EARTH 103 GN(3), EMSC 470(1-6), GEOG 430(3), GEOSC 310(4), or METEO 300(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from the Earth Systems Committee's approved list of courses (Sem: 5-8)

Last Revised by the Department: Spring Semester 2000

Blue Sheet Item #: 28-05-018

Review Date: 2/15/00

EM

Energy Business and Finance Minor

*University Park: College of Earth and Mineral Sciences (EBF) Contact: Professor Seth Blumsack, Program Officer
World Campus*

The minor in Energy, Business and Finance is an offering of the College of Earth and Mineral Sciences. The minor introduces students to financial, investment, and management concepts applied to private sector organizations whose operation emphasizes the Earth and its environment, the energy and mineral industries, or the development of new and enhanced materials. The minor focuses on the leadership and information strategies characteristic of enterprises that are succeeding in a rapidly integrating global economy.

The minor provides science and engineering students an introduction to basic entrepreneurial and business concepts to help prepare them for success in a changing professional environment. It also provides other Penn State students an opportunity to focus on business strategies in the Earth resources, environmental, and materials industries. A minimum of 27 credits is required for the minor. A student enrolled in this minor must receive a grade C or better in all courses in the minor. Advising is available through the EMS Student Center (14 Deike Building) or the professor in charge.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 27-29 credits

PRESCRIBED COURSES (12 credits)

ECON 102 GS(3), EBF 200 GS(3), EBF 301(3), EME 460(3) (Sem: 5-8)

ADDITIONAL COURSES (9-11 credits)

Select 3-4 credits from: MATH 22 GQ(3); MATH 110 GQ(4); MATH 140 GQ(4) (Sem: 3-4)

Select 3-4 credits from: STAT 200 GQ(4); STAT 401(3); EBF 472(3) (Sem: 5-6)

Select 3 credits from: EGEE 101 GN(3) or EGEE 102 GN(3) or EGEE 120 GS;US;IL(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from the approved list of EMS courses. Approved courses are: EBF 401 (3), EBF 402(3), EBF 473(3), EBF 483(3), EBF 484(3), EGEE 401(3), EME 444(3), GEOG 424 US;IL(3), GEOG 430(3), GEOG 431(3), GEOG/EME 432(3), GEOG 444(3), GEOG 469(3), GEOSC 402 IL(3), GEOSC 454(3), and METEO 473(3) (Sem: 7-8).

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-02-015

Review Date: 10/3/2017

EM/BA

Applied Economics Minor

Penn State Erie, The Behrend College (APECN)

Contact(s): Greg Filbeck (mgf11@psu.edu)

The minor in economics requires completion of 18 credit hours of coursework in economics. In addition to the introductory courses (ECON 102 and ECON 104), economics minors must complete 12 semester hours in economics elective courses at the 300/400 level. Note that at least 6 of those credit hours must be at the 400 level. The economics minor is a strong complement to virtually any major, including those within, and outside of, the School of Business. Since most School of Business majors will, as part of their major, already have earned 6 to 9 credits toward the economics minor, earning a minor in economics is particularly attractive for these students. The economics minor provides a general introduction to economic thought helping students better understand a variety of contemporary economic issues. The minor can enhance the market value of a major and can provide students with options and opportunities beyond those offered by the major program of study.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

ECON 102 GS(3), ECON 104 GS(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 6 credits from ECON courses (Sem: 3-6)

Select 6 credits of 400-level ECON courses (Sem: 3-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-021

Review Date: 08/20/13

BD

Economics Minor

*University Park, College of the Liberal Arts (ECON)
World Campus*

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

ECON 102 GS(3), ECON 104 GS(3) (Sem: 3-4)

ECON 302 GS(3), ECON 304 GS(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of additional ECON courses at the 400-level (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

Review Date: 9/2/03

LA

Environmental Engineering Minor

University Park, College of Engineering (ENV E)

This minor is designed to provide students in engineering, science, and other majors with a comprehensive study of environmental issues and the skills necessary to solve problems associated with environmental pollution.

For entrance into the minor, students must be at least fifth-semester standing and have completed CHEM 110 GN(3), MATH 141 GQ(4), and PHYS 211 GN(4).

The minor consists of 18 credits, at least 6 of which must be at the 400 level. A grade of C or better is required for all courses in the minor.

An online application is available at: http://www.engr.psu.edu/CE/env_minor.html.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits (2 credits of engineering design are included)

PRESCRIBED COURSE (3 credits)

CE 370(3) (Sem: 3-6)

ADDITIONAL COURSES (15 credits)

Select 3 credits from Chemistry and Biological Sciences: BE 308, CE 479(3), CHEM 202(3), CHEM 210(3) (Sem: 3-8)

Select 0-3 credits from Process Engineering: BE 302(4), CHE 210(3), EGEE 302(3), MNPR 301(3), NUCE 430(3) (Sem: 5-8)

Select 3 credits from Applied Fluid Mechanics: AERSP 308(3), BE 467(4), CE 371(3), CE 462(3), CHE 330(3), EME 303(3), ME 320(3), METEO 454(3), or NUCE 431(4) (Sem: 5-8)

Select 6-9 credits from Environmental Sciences and Design: BE 468(3), BE 477(3), CE 472(3), CE 475(4), CE 476(3), CHEM 402(3), ERM 411(3), ERM 412(3), ERM 413(3), ERM 447(3), ERM 450(3), EGEE/ME 430(3), EGEE 470(3), ENVSE 408(3), ENVSE 427(3), FSC 431(3), GEOSC 452(3), ME 405(3), ME 433(3), NUCE 405(3), NUCE 420(3), NUCE 428(3), SOILS 420(3) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-06-067A

Review Date: 04/12/2011

UCA Revision #1: 8/4/06

UCA Revision #2: 7/27/07

EN

Engineering Leadership Development Minor

University Park, College of Engineering (E L D)

This interdisciplinary minor is designed to provide engineering students with critical principles and skills. Engineering graduates must demonstrate the ability to assume leadership roles in a competitive technologically complex global society. There are increasing demands for engineers to be able to deal effectively with other people, including the ability to work in teams and to interact with customers and other organizations on both national and international levels. Students will employ engineering case studies in active and collaborative classroom settings to develop these skills. The minor consists of 18 semester hours. A grade of C or better is required in all minor courses. Students in all engineering majors are eligible. For admission to the minor, students must have completed ENGR 408(2). Students should apply during their sophomore year.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

ENGR 409(3) (Sem: 5-6)

ENGR 408(2) (Sem: 5-8)

ENGR 493(1), S T S 460(3) (Sem: 7-8)

ADDITIONAL COURSE (3 credits)

BA 250(3) or ENGR 407(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in consultation with the coordinator of the Engineering Leadership Development Minor (Sem: 5-8)

Last Revised by the Department: Spring Semester 2002

Blue Sheet Item #: 30-03-100C

Review Date: 11/20/01

EN

Electrochemical Engineering Minor

University Park, College of Earth and Mineral Sciences (ELCHE)

The electrochemical engineering minor is designed to equip students with the knowledge necessary to achieve the following educational objectives: become valuable contributors in addressing society's clean energy needs and demands especially in the electrochemical power generation sector; and educators, practicing engineers, and national leaders in electrochemical energy conversion and storage. The minor integrates skill sets in fundamentals of electrochemistry (e.g. chemistry, physics, mathematics, thermodynamics, and chemical kinetics) and electrochemical engineering applications (batteries, solar, flow and fuel cells, electrochemical synthesis and corrosion) to ensure successful career opportunities and growth within electrochemical power generation industries, government agencies, and academia. The curriculum should allow students in energy related programs such as chemical, civil, electrical, environmental, mechanical, and materials science and engineering to readily take advantage of the minor and be better prepared for careers in clean power generation and future green technologies.

The integration of knowledge and skills acquired through the inquiry-based teaching methods should enable students of the program to achieve the following student educational outcomes:

- solve problems relating to the production, storage, distribution and utilization of electrochemical energy and the associated environmental issues
- design and conduct experiments, acquire data, define, analyze, and interpret data, and solve practical, complex problems on a variety of electrochemical technologies such as batteries, solar cells, flow and fuel cells, electrolyzers, and supercapacitors
- integrate professional, ethical, social and environmental factors in electrochemical engineering design and problem solving and understand the impact of these factors on global energy issues
- develop the ability to communicate effectively in writing and orally and build teamwork
- acquire the desire for lifelong learning to maintain technical competence and keep abreast of new developments in the field.

A grade of C or better is required for all courses in the minor.

For the minor in Electrochemical Engineering, a minimum of 35 credits is required.

REQUIREMENTS FOR THE MINOR: 35 credits

PRESCRIBED COURSES (20 credits)

CHEM 112 GN(3), ESC 455 (3), EGEE 441(3), MATH 251(4), MATSE 421 (3), PHYS 212 GN(4) (Sem: 7-8)

ADDITIONAL COURSES (15 Credits)

Select 6 credits from: EME 301(3), EME 303(3) or CHE 220(3), CHE 330(3) or ME 300(3), ME 320(3) or MATSE 401(3), MATSE 402(3)

Select 9 credits from EGEE 420(3), EGEE 437(3), EGEE 436(3), EME 407(3), ME 403(3) (Sem: 7-8)

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-02-017

Review Date: 09/27/2011

English Minor

*Penn State Berks - Christian Weisser, crw17@psu.edu
Penn State Erie, The Behrend College (ELISH)*

Contact: Craig Warren, caw43@psu.edu

For the English minor at Penn State Erie, the student must take (beyond the basic General Education) 18 credits of courses in ENGL or ELISH; 6 of these credits must be at the 400 level. The student is encouraged to take courses from each of the areas within the major (The Canon and Its Critics, Globality and Literature, Cultural Studies), as well courses in creative writing. By doing so, students will develop skills in writing and critical thinking that will prove valuable in their later work experiences.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select at least 12 credits from ENGL or ELISH 200-289 [Students may not count courses used to satisfy General Education Writing/Speaking Skills] (Sem: 1-6)

Select at least 6 credits from ENGL or ELISH 400-493

Last Revised by the Department: Fall Semester 2001

Energy Engineering Minor

University Park, College of Earth and Mineral Sciences (ENENG)

Professor Sarma Pisupati, Program Officer

The minor in Energy Engineering is designed to provide students in engineering, science, and energy business and finance (EBF) with additional courses, exposure, and experiences to the principles and applications of energy engineering. Courses available to students include thermal sciences; petroleum and natural gas processing; renewable/sustainable energy; chemistry of fuels; electrochemical, chemical and nuclear energy conversion processes; physical processes in energy engineering; air pollution; and green engineering and environmental compliance. As a result, the selection of this minor can provide additional career options for students in a wide range of offerings at Penn State.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (18 credits)

Select 9 credits from the following courses: EGEE 302(3), EGEE 304(3), EGEE 411W(3), EGEE 420(3), EGEE 430(3), EME 301(3) (Sem: 5-6)

Select 9 credits from the following courses: EGEE 433(3), EGEE 437(3), EGEE 438(3), EGEE 441(3), EGEE 451(3), EGEE 464(3), EGEE 470(3), FSC 431(3), FSC 432(3) (Sem: 7-8)

Last Revised by the Department: Fall Semester 2007

Blue Sheet Item #: 35-05-074

Review Date: 3/4/09

EM

English Minor (ENGL)

University Park, College of the Liberal Arts (ENGL)

Contact: Abington College, Ellen Knodt, ekn1@psu.edu; Altoona College, Erin Murphy, ecm14@psu.edu; Capital College, Jennifer Hirt, jlh73@psu.edu; Penn State Brandywine, Adam Sorkin, ajs2@psu.edu; Penn State Fayette, Danielle Mitchell, dmm52@psu.edu; Penn State Greater Allegheny, James Jaap, jjj15@psu.edu; Penn State Mont Alto, Kevin Boon, kab25@psu.edu; Penn State Wilkes-Barre, Steven Putzel, sdp4@psu.edu; College of the Liberal Arts, Elizabeth Brown, eaf4@psu.edu; Penn State York, Dr. Jennifer Nesbitt, jpn12@psu.edu

A grade of C or better is required for all courses in the minor.

For the minor in English a minimum of 18 credits are required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS: (18 credits)

Students may not count courses used to satisfy General Education Writing/Speaking Skills

Select 6 credits from ENGL 200-299 (Sem: 3-8)

Select 6 credits from ENGL 400-499 (Sem: 3-8)

Select 6 additional credits in English (Sem: 3-8)

Last Revised by the Department: Fall Semester 2015

Blue Sheet # 44-03-073

Review Date: 11/17/15

Entrepreneurship and Innovation Minor

Intercollege Program (ENTI)

Penn State Abington - Gary Calore (gsc1@psu.edu)

Penn State Berks - Dr. Sadan Kulturel-Konak (sxx70@psu.edu)

University Park - Dr. Anne Hoag (amh13@psu.edu)

University College - Lehigh Valley - Denis Ogden (dto2@psu.edu)

Skills attributed to entrepreneurial behavior and innovative thinking are beneficial for students in most if not all majors, and are critical to career success in established companies and new organizations to address pressing needs around the globe. This interdisciplinary minor uses problem-based learning pedagogy to prepare students to create value and be agents of positive change in their discipline and their careers. The courses develop skills in problem solving, opportunity recognition, self-efficacy, leadership, communications and learning from failure. To meet the students' broad range of entrepreneurship and innovation interests, core courses (9 credits) establish foundational knowledge, and then students select a concentration cluster aligned to specific contexts such as entrepreneurship in food, technology, art, journalism, or internet. Students who complete the ENTI minor will be better prepared to be innovation leaders in their chosen career path, such as being entrepreneurial in an existing company (intrapreneurship), engaging in a start-up venture full or part-time, finding avenues to leverage their art or craft, or creating alliances to meet social or business needs.

Advising for students in this minor and approval of curriculum exceptions will be available through the Entrepreneurship and Innovation (ENTI) Adviser for each cluster.

Arts Cluster *[College of Arts and Architecture]*

This specialization prepares students for entrepreneurial action in an arts context. To "entrepreneur" in the arts, one must understand aesthetic value and what drives people to consume aesthetic products. By learning how various arts markets view and consume art, emerging arts entrepreneurs envision "products" with specific markets in mind and craft marketing strategies to communicate aesthetic value to audiences. Upon learning how the non-profit and for-profit arts ecologies operate, students envision and develop their arts career and venture within the context, tying together the aesthetic and cultural value of their art form with the business acumen necessary to launch and sustain an entrepreneurial arts enterprise.

Digital Entrepreneurship and Innovation Cluster *[College of Information Sciences and Technology]*

This specialization prepares a student to harness digital technologies and digital business models to develop their own concepts into commercial concerns or to contribute to the innovation activities of existing organizations (i.e., intrapreneurship). The IST Digital Entrepreneurship & Innovation cluster focuses on the impact of Information Technology (IT)-driven innovation across multiple industry sectors including for-profit, non-profit and governmental organizations. IT-driven innovation has created new business opportunities for both entrepreneurs and intrapreneurs and is key to increasing efficiencies and expanding the linkage between user-centric products and services. Students who complete this cluster will gain a foundational understanding of emerging information technologies, the components of digital business models, and implementation and design techniques that meet or exceed user-centric requirements.

Entrepreneurship as Advocacy Cluster *[College of the Liberal Arts]*

This specialization empowers students to utilize the process of entrepreneurship as a form of advocacy to improve the human condition and enhance public life. The cluster leverages a critique of the business paradigm of "maximize shareholder value" to encourage students to create organizations that can be a force for positive change in society.

Food and Bio-innovation Cluster *[College of Agricultural Sciences]*

This specialization will develop future entrepreneurs and innovators to address opportunities and challenges in the agriculture and life sciences space. The cluster focuses on the cornerstone challenge for agriculture: producing food for the world with entrepreneurial activity and innovation to develop, convert and use biological materials and natural resources (plants, animals, ecosystems and organisms, etc.) to meet the material and energy needs of society. Students are encouraged to take a series of courses in the cluster that complement their personal venture interests and engage in a series of immersive venturing experiences that can range from creating new ventures to mentoring with seasoned entrepreneurs or working within entrepreneurial organizations.

Hospitality Management Cluster *[College of Health and Human Development]*

This specialization prepares a student to create and develop novel but sound entrepreneurial concepts related to the hospitality industry in such businesses as lodging and food service. For example, through this cluster, students could develop and refine entrepreneurial concepts related to hotels, motels, bed & breakfasts, quick-service restaurants, upscale restaurants, mobile dining such as food trucks, on-line travel agencies, and other on-line ventures. The minor is also designed to prepare students to be innovators within existing organizations. Students who complete this cluster develop skills in creating business plans, feasibility studies, competitive analysis, supply and demand analysis, market analysis and financial forecasting. Students in this concentration are expected to include a mix of majors, not only students majoring in hospitality management.

New Media Cluster *[College of Communications]*

This specialization examines opportunities and challenges in the creation and distribution of news, entertainment and information. The same technological innovations that make it easy to start a media enterprise have introduced a host of editorial and business complexities. Media production and distribution skills and knowledge of media business, technologies, law and ethics are critical.

New Ventures Cluster *[Smeal College of Business]*

This specialization helps students develop the skills and ways of thinking required to create, develop, innovate and manage entrepreneurial companies. Students learn about acquiring and balancing limited resources, changing business direction quickly, building a coherent team, managing intellectual property, and creating new markets. This cluster develops a wide range of managerial skills not usually demanded in one person within a larger organization.

Social Entrepreneurship Cluster *[College of Engineering]*

This specialization focuses on creating sustainable social impact within marginalized communities. The cluster grounds students in social business, user-centered design for extreme affordability, systems thinking and scholarly research to develop innovative and appropriate technology-based solutions to address compelling global challenges. Travel and fieldwork in which students work in multidisciplinary teams to research, design, test, and commercialize ventures are required.

Technology Based Entrepreneurship Cluster *[College of Engineering]*

This specialization develops skills and knowledge through a practical entrepreneurial experience in a technology based environment. Technology and engineering design topics form the practical content of the cluster. General entrepreneurial business topics and tracking current and emerging technologies provide additional foundation structure for this cluster. Students understand and apply fundamental engineering design skills, product feasibility analysis and marketing techniques to move innovative products toward commercialization.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing is given as (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 18-19 credits, depending on cluster

PRESCRIBED COURSES (9 credits)

MGMT 215(3) (Sem: 1-5)

ENGR 310(3) (Sem: 2-6)

ENGR/IST/MGMT 425(3) (Sem: 4-8)

ADDITIONAL COURSES (9 credits)

Select 9 or more credits from one of the following clusters.

Students may not use a required course from their major in their chosen cluster. Other courses, such as technical electives, out-of-college electives, and general education courses may be able to be used to meet requirements in major as well as the ENTI Minor. In all clusters, students may substitute up to 3 credits of research topics, internship or independent studies courses focused on relevant entrepreneurship or innovation topics in consultation with an adviser. Each cluster is structured to provide a clear course "path" so any student from any major can complete the cluster and therefore the ENTI minor.

Arts Cluster

Required courses: AA 322(3), AA 323(3), AA 324(1) in sequence or concurrent, and AA 424(3) (Sem: 1-8)

Digital Entrepreneurship and Innovation Cluster

Required courses: IST 237(3), IST 337(3), and IST 437(3). (IST 237 is prerequisite for IST 437) (Sem:1-8)

Entrepreneurship as Advocacy Cluster Required Courses

Required Courses: LA 202(3), LA 403(3), LA 424(3) in sequence, LA 403 and LA 424 can be concurrent (Sem: 1-8)

Food and Bio-innovation Cluster

Select up to 6 credits of the following 200-300 courses in the College of Agricultural Sciences: BRS 391(2), BRS 392(2), AEE 201(3), AGBM 200(3), AGBM 220(3), AGBM 302(3), AGBM 308(3), AGBM 338(3), ANSC 207(2), ANSC 306(3), ANSC 308(4), ANSC 309(4), ANSC 310(3), ANSC 311(3), ANSC 324(3), ANSC 327(3), ANSC 350(2), CED 375(3), ERM 300(3), FDSC 200(3), FDSC 206(3), FOR 201(3), HORT 250(3) (Sem:1-8)

Select at least 3 credits of the following 400 level courses in the College of Agricultural Sciences: AGBM 407(3), AGBM 408(3), AGBM 440(3), AGBM 460(3), ANSC 410(4), ANSC 429(3), ANSC 450(3), CED 417(3), ERM 411(3), ERM 412(3), ERM 413(3), FDSC 411(2), FDSC 430(3), FOR 440(3), HORT 410(3), HORT 450(3), HORT 453(3), HORT 455(3), CED 452(3), TURF 436(3), WP 416(3) (Sem:1-8)

Hospitality Management Cluster

Select 3 credits from HM 482(3) or HM 484(3) (Sem: 1-8)

Select 6 credits from the following: HM 413(3), HM 432(3), HM 483(3), HM 496(3) (Sem:1-8)

New Media Cluster

Select 9 credits from the following area. The course marked with * must be selected. COMM 271(3)*, COMM 461(3), COMM 481(3), COMM 483(3), COMM 484(3), COMM 490(3), COMM 491(3), COMM 492(3), COMM 493(3) (Sem:1-8)

New Ventures Cluster

Select 9-10 credits from the following area. (students may only count one of the following course options BA 241 and BA 242; BA 243, BLAW 243, or BLAW 341 towards the minor): BA 250(3), BA 241(2) and BA 242(2), BA 243(4), BLAW 243(3), BLAW 341(3), MGMT 420(3), MGMT 426(3), MGMT 427(3) (Sem:1-8)

Social Entrepreneurship Cluster

Required courses to be taken in the following order: ENGR 451(3), EDSGN 452(2) and EDSGN 453(1) concurrent, EDSGN 454(0.5), and ENGR 455(3) (Sem:1-8)

Technology Based Entrepreneurship Cluster

Required courses: ENGR 411(3), ENGR 407(3) in sequence or concurrent, and ENGR 415(3) (Sem:1-8)

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-094

Review Date: 8/22/2017

Entomology Minor

College of Agriculture Sciences (ENT)

Through the Department of Entomology, the minor in Entomology is primarily designed for (but not restricted to) students in the Agroecology major seeking additional studies in the entomological sciences. Successful completion of this minor area of study will help prepare students for graduate studies in entomology and related fields.

A minor in Entomology requires 22 credits in approved courses in addition to the major requirements of the student's choice. Appropriate course substitutions may be considered with minor adviser approval.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 22 credits

PRESCRIBED COURSES (9 credits)[\[1\]](#)

BIOL 110 GN(4)[18], ENT 313(2), ENT 457(3) (Sem: 2-4)

ADDITIONAL COURSES (13 credits)[\[1\]](#)

Select 1 credit from ENT 314(1) or ENT 316(1) (Sem: 2-4)

Select 3 credits from AGECO 201(3), BIOL 222(3), BIOL 427(3), PPEM 405(3) (Sem: 3-8)

Select 6 credits from ENT/VBSC 402(3), ENT 410(3), ENT 420(3), ENT 424(3), ENT 425(3), ENT 432(4), ENT 445(3) (Sem: 4-8)

Select 3 credits of ENT 496(1-18) (Sem: 4-8)

[\[1\]](#) A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

[\[18\]](#) A grade of C or better per course is required for teacher certification.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

AG

Entrepreneurship Minor

Altoona College (ENTRP)

Entrepreneurship plays a crucial role in the way new ideas, opportunities, inventions, and technologies are created and introduced into the global marketplace. Students in this minor first develop an understanding of financial forces that affect business ventures. The minor then provides them with a core of courses that enhance their major field of study and that provide a background sufficient for them to take advantage of many entrepreneurial opportunities.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

A grade of C or better is required for all courses in the minor.

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES (13 credits)

ACCTG 211(4), ECON 102 GS(3) (Sem: 1-4)

ENTR 300(3), ENTR 320(3) (Sem: 5-7)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 3 credits at the 400-level from entrepreneurship (Sem: 7-8)

Select 3 credits of ENGL 419(3) or any 400-level Business or Economics course (Sem: 7-8)

Last Revised by the Department: Fall Semester 2000

Blue Sheet Item #: 28-06-008A

Review Date: 5/9/02

AL

Environmental Inquiry Minor

Intercollege Program (ENV I)

This intercollege minor is designed for students across the disciplines who wish to prepare for addressing environmental issues or problems as professionals or citizens. The minor is available to all undergraduates regularly enrolled in a degree program at the University. The objectives are to allow students to gain the multiple perspectives necessary for understanding environmental issues as well as to increase skills in collaborating with those from very different disciplinary backgrounds to find acceptable solutions. Students will be challenged to move beyond the channels of thinking characteristic of their own discipline to new ways of knowing, new sensitivities, and new analytical approaches. The program will engage students actively in learning experiences outside their major course of study. This minor is intended not to replace existing minors but to be a true intercollege, interdisciplinary minor. A grade of C or better is required for all courses in the minor.

Advising for students in this minor and approval of curriculum exceptions will be available through the Environmental Inquiry Adviser designated within each participating college.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-19 credits

ADDITIONAL COURSES (15-16 credits)

Introductory course: The introductory course offers a broad overview of a topic that relates to an environmental theme. It is designed as a preface to learn about the many disciplines and approaches used to study the environment.

Select one course (3-4 credits) from the following list:

AGECO 121 GN(3), ANTH 45 GS;US;IL(3), BISC 3 GN(3), BIOL 120A GN;US;IL(3), BIOL 110 GN(4), CED 152(3), ERM 210 GN(3), EARTH 2 GN(3), EARTH 100 GN(3), EARTH 101 GN;US(3), EARTH 111 GN;US(3), EGEE/MATSE 101 GN(3), EGEE 102 GN(3), EMSC/STS 150 GN;IL(3), ENGL 180 GH(3), ENT 202 GN(3), ENVST 100 GS(3), FDSC/STS 105 GHA(3), GEOG 30N GS;IL(3), GEOG 110 GN(3), GEOG 123 GS;IL(3), GEOSC 21 GN(3), GEOSC 40 GN(3), HIST/STS 151 GS;US(3), HORT 101 GN(3), HORT 150 GN(3), INTAG 100 GS;IL(3), MATSE 81 GN;IL(3), PHIL 118 GH(3), PLSC/STS 135 GS(3), AGECO 134 GN(3), SOC 23 GS(3), SOILS 71 GN;IL(3), SOILS 101 GN(3), WFS 209 GN(3) (Sem: 1-4)

Cluster course selections: Select 9 credits from one of the following clusters. (Students may not use a course from their major in their chosen cluster). In all cases/clusters, students may substitute up to 3 credits of research topics, internship, or independent studies courses focused on a relevant environmental topic in consultation with an adviser. (Sem: 1-8)

A. Biodiversity and Ecosystems

This specialization prepares a student to learn about the importance of biodiversity in ecosystems. Over the last 100 years, humans have dramatically reduced the biodiversity on the earth primarily through loss of habitat. To reduce the pressure on the world's biological resources will take political will, scientific research and creativity in planning. A central focus is on developing effective understanding of land management practices that can enhance the prospects for biological diversity.

BIOL 127(3), BIOL 220W GN(4), BIOL 417(4), BIOL 435(3), BIOL 448(3), BIOL 482(3-4), BIOL 499A(3), CE 370(3), CHEM 20(3), CHEM 301(3), CHEM 402(3), ENT 202 GN(3), FOR 308(3), FOR 401(3), FORT 100(1), GEOG 110 GN(3), GEOG 314 GN(3), GEOG 123 GS;IL(3), GEOG 310W(3), GEOSC 21 GN(3), HORT 101 GN(3), INTAG 100 GS;IL(3), LARCH 245(3), METEO 451(3), PPEM 120 GN(3), STS 201 GN(3), BIOL 424(3), SOILS 101 GN(3), SOILS 412W(3), WFS 430(3)/FOR 430(3)

B. Environment and Society

This specialization provides insights into the debates and challenges about the distribution and utilization of the world's environmental resources. All people deserve to live in a safe environment regardless of their income, skin color, religion or gender. Yet, many of the poorest people in the world live in unsafe environmental contexts. Research in many different fields of social science, as well as ethical research, is required to understand how to promote and achieve environmental justice.

CED/CEDEV 430(3), ANTH 456(3), CED 152(3), CED 230(3), CED 309(3), CED 410(3), ERM 411(3), CED 201(3), CED 429(3), CED 431(3), EARTH 101 GN;US(3), EMSC 101 US;IL(3), ECON 428(3), GEOG 124 GS;IL(3), GEOG 438W(3), GEOSC 109 GN(3), GEOSC 310(4), GEOSC 402 IL(3), HIST 453(3), INTAG 100 GS;IL(3), MNG 400 IL(3), NUTR 497(3), PHIL 132 GH(3), RSOC 11 GS;US(3), AGECO 134 GN(3), STS 201 GN(3), STS 420(3), SOC 423(3), SOC 450(3), SOILS 71 GN;IL(3)

C. Environmental Explorations

This specialization scrutinizes the range of debates, practices and possibilities guiding discussions of how to achieve equitable and sustain able development. Global and national discussions are beginning to probe how we can move toward a future where resources are more effectively utilized and the environment is maintained while achieving well being for the whole world. A cross-disciplinary approach is necessary to promote an understanding of these broad discussions.

Students must take 3 credits each of social science, natural science, and arts and humanities courses:

Social Science	Natural Science	Arts and Humanities
CED 201(3)	BIOL 220W GN(4),	AMST 50 GH(3)
CED 429(3)	BIOL 427(3)	COMM 408(3) or STS 408 (3)
CED 431(3)	BIOL 435(3), BIOL 436(3), BIOL 444(3), BIOL 446(3)	COMM 411(3), COMM 459(3)
ANTH 40(3), ANTH 146 GS;US(3)	BIOL 450(3-5), BIOL 461(3), BIOL 499A IL(3)	CED 410(3)
ANTH 152(3), ANTH 456(3)	CHEM 20(3), CHEM 301(3), CHEM 402(3)	EMSC 150 GN;IL(3) or STS 150 GN;IL(3)
CED 410(3)	EMSC 121 GN(3)	ENGL 88 GH(3), ENGL 233 GH;GN(3)
ECON 428(3)	EARTH 106 GN(3)	ENGL 402(3), ENGL 404(3),
FDSC 280 GH(3) or PHIL 280 GH(3)	ERM 300(3)	ENGL 430(3)
GEOG 20 GS;US;IL(3), GEOG 333(3), GEOG 430(3)	FOR 308(3)	FDSC 280 GH(3) or PHIL 280 GH(3)

GEO SC 451(3)	GEOG 110 GN(3), GEOG 115 GN(3)	GEOG 434(3), GEO SC 310(4)
LARCH 65 GA;US;IL(3)	GEO SC 10 GN(3), GEO SC 20 GN(3), GEO SC 303(3)	HIST 428(3) or STS 428(3)
NUTR 497(3)	GEO SC 320(3), GEO SC 340(3)	HIST 453(3)
PLSC 412(3), PLSC 420(3)	METEO 4 GN(3)	LARCH 60 GA;US;IL(3)
AGECO 134 GN(3)	MNG 400 IL(3)	PHIL 13 GH(3), PHIL 132 GH(3), PHIL 403(3)
STS 430 IL(3) or NUTR 430 IL(3)	PPEM 120 GN(3)	RSOC 134 GN(3) or AGE CO 134 GN(3)
SOC 422(3)	RSOC 134 GN(3) or AGE CO 134 GN(3)	
TURF 425(3)	WFS 408(3), WFS 430(3) or FOR 430(3)	WFS 440(3)

D. Ideas About the Environment

This specialization engages the philosophical and political challenges underpinning concerns of modern environmentalism. People have always contemplated the meaning of the world around them and the ways in which their reality is shaped by the environment. The meaning and value of the "environment" therefore depends on a person's range of understandings, ideas, and representations about the physical world. To operate effectively, civil society must be based on open discussions including environmental concerns, and this requires basic levels of ecological literacy.

AG 160 GH(3), CED 450 IL(3), BIOL 419 (3), BIOL 438(3), BIOL 461(3), ECON 428(3), EMSC/STS 150 GN;IL(3), ENGL 88 GH(3), ENGL 430(3), ENVE 460(3), FDSC/PHIL 280 GH(3), GEOG 123 GS;IL(3), GEOG 434(3), HIST 110 GH;IL(3), HIST/STS 428 IL(3), HIST 453(3), LARCH 60 GA;US;IL(3), NUTR/STS 497(3), PHIL 403(3), STS 100 GH(3), STS 101 GH(3), SOC 450(3), SOILS 71 GN;IL(3)

E. Water Resources

This specialization emphasizes basic literacy required to understand the debates surrounding water as a resource and offers insights into what people can do to protect and maintain its integrity on a worldwide basis. Water and water resources are central to human life, and yet modern industrialization and human settlement patterns are creating untenable competition for water between humans, and other flora and fauna. Basic science is required to ascertain problems of supply. Social science understanding is required to understand challenges facing water supply and utilization and the search for wise utilization of the world's water resources.

PLANT 217(3), ASM 327(3), BE 307(3), BIOL 220W GN(4), BIOL 435(3), CE 370(3), CE 371(3), CE 461(3), CE 475(4), ERM/WFS 450(3), EARTH 111 GN;US(3), ENVE 440(3), ENVE 411(3), ENVE 415(3), FOR 470(3), GEOG 431(3), GEO SC 40(3), GEO SC 440(3), GEO SC 452(3), METEO 451(3), WFS 422(3), WFS/ERM 435(3)

F. Human Settlements

This specialization examines human settlement patterns and their interaction with the environment. Particular emphasis is placed on patterns of development, human movement and migration patterns, as well as environmental impacts. As population increases worldwide, land is increasingly taxed beyond proper capacity. Zoning regulations, suburban sprawl, and uneven settlement that replaces fertile agricultural land have all become major issues within the policy spectrum that must be dealt with to ensure a positive future for the entire world population.

CED 431(3), AMST 50 GH(3), ANTH 45 GS;US;IL(3), ARCH 316 GA(3), BIOL 120A GN;US;IL(3), BIOL 120B GN;US(3), BIOL 120C GN;IL(3), COMM/STS 408(3), COMM 411(3), CED 230(3), CED 309(3), CED 409(3), EARTH 101 GN;US(3), EARTH 106 GN(3), ENGL 88(3), ENGL 402 GH(3), FDSC/PHIL 280 GH(3), GEOG 20 GS;US;IL(3), GEOG 333(3), GEOG 436(3), GEO SC 109 GN(3), LARCH 60 GA;US;IL(3), LARCH 65 GA;US;IL(3), METEO 4 GN(3), NUTR 497(3), SOILS 71 GN;IL(3), WFS/ERM 450(3), TURF 425(3)

G. Energy Resources

This specialization offers a glimpse into the emerging technology that exists in the energy sector. As the worldwide supply of fossil fuels diminishes, and the demand for those fuels increases, new energy technology must be developed to power our planet. In recent years, energy sustainability and the use of infinite resources have been considered serious options for the first time. Thus, this cluster option employs an interdisciplinary strategy with the goal of educating individuals on a broad-range of emerging technologies in relation to energy resources.

CED 450 IL(3), AGE CO/CED 201(3), CED 429(3), CED 431(3), EGEE/MATSE 101 GN(3), EGEE 102 GN(3), EGEE 401(3), EGEE 464(3), EMSC 101 US;IL(3), EMSC/STS 150 GN;IL(3), GEO SC 451(3), MATSE 81 GN;IL(3)

Final course: This is the capstone course of the minor which allows students to explore more deeply and recap their study within the minor's curriculum. (Sem: 5-8)

Select one course (3 credits) from the following list:

BIOL 419(3), BIOL 461(3), CED 410(3), ERM 430(3), GEOG 412(3), GEOG 430(3), GEOG 436(3), GEO SC 451(3), NUTR 497(3), SOC 422(3), STS 420(3), SOILS 422(3), WFS/FOR 430(3)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select one 400-level course (3 credits) from a cluster option other than the one you have chosen. Field experience courses are encouraged. (Sem: 1-8)

Last Revised by the Department: Spring Semester 2009

Blue Sheet Item #: 37-01-043

Review Date: 8/26/08

UCA Revision #1: 8/4/06

UCA Revision #2: 7/27/07

UE

Environmental Systems Engineering Minor

University Park, College of Earth and Mineral Sciences (ENVSE)

PROFESSOR WILLIAM GROVES

The minor in environmental systems engineering is for students interested in environmental issues associated with the extraction, processing and utilization of mineral and energy resources and their solutions. It provides an opportunity for students to understand and appreciate the interrelationship between energy and the environment, be exposed to the basic courses in environmental systems engineering, and to appreciate and evaluate the impact of environmental pollution control on viability of the profitability and feasibility of operations associated with the safe extraction, processing and utilization of mineral and energy resources. A minimum of 18 credits is required for the minor. A student enrolled in this minor must receive a grade C or better in all courses in the minor. Advising is available through the professor in charge.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (15 credits)

EME 460(3), ENVSE 406(3), ENVSE 427(3), ENVSE 450(3), MNPR 301(3) (Sem: 5-7)

ADDITIONAL COURSES (3 credits)

EGEE 470(3), ENVSE 400(3), or MNPR 426(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2010

Blue Sheet Item #: 39-02-012

Review Date: 09/28/2010

Environmental Studies Minor

Altoona College (ENVST)

The interdisciplinary minor in Environmental Studies gives students a broad-based introduction to the natural environment and human interactions with it. Students gain awareness and understanding of environmental issues from the perspectives of several disciplines in relevant natural sciences (ecology, biology, geology, and/or environmental chemistry, for instance), the social sciences (environmental economics and/or public policy), and the arts and humanities (environmental history, ethics, and/or literature). Core courses in environmental studies, emphasizing applied and experiential learning, serve to integrate and synthesize knowledge from the natural sciences, social sciences, and arts and humanities. The goal of the program is "ecological literacy." Students completing the minor gain sufficient awareness and understanding of environmental issues to put environmental problems in a variety of contexts and to apply pertinent skills and knowledge (from studies in both their major and the minor) in addressing those problems. The minor helps prepare students for employment in the private sector or with government agencies and environmental advocacy groups, or for postgraduate study in environmental science, public policy, the humanities, or law.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (3 credits)

ENVST 100(3) (Sem: 1-2)

ADDITIONAL COURSES: (6 credits)

Select 3 credits from ENVST 200(3) or ENVST 400(3) (Sem: 3-8)

Select 3 credits from BIOL 110 GN(4), BIOL 220W GN(4), ENGL 180 GH(3), GEOSC 20 GN(3), CHEM 20(3), CHEM 21(1), GEOG 115 GN(3), STAT 250 GQ(3), ECON 429(3), HIST 453(3), PHIL 403(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS: (9 credits)

Select 9 credits (3 in each area listed below) in consultation with an academic adviser. At least six credits must be at the 400-level.

a. Natural Sciences: BIOL 240W(4), BIOL 417(3), BIOL 427(3), BIOL 435(3), BIOL 446(3), BIOL 450(3-5), ENVST 497(3), FOR 308(3), FOR 430/WFS 430(3), GEOSC 303(3), GEOSC 340(3), WFS 408(3) (Sem: 3-8)

b. Social Sciences: ANTH 40(3), ANTH 146 GS/US(3), ANTH 152(3), ANTH 456(3), BIOL 464(3), ENVST 497(3), GEOG 423(3), GEOG 430(3), PLSC 444(3), PLSC 490(3), STS 47(3) (Sem: 3-8)

c. Arts and Humanities: ENGL 404(3), ENGL 412(3), ENGL 415(3), ENGL 416(3), ENGL 421(3), ENGL 430(3), ENVST 497(3), HIST/STS 151(3), HIST 428/STS(3); When topic appropriate and with program approval: ENGL 400(3), ENGL 401(3), ENGL 483(3), HIST 200 US(3), HIST 497(3) (Sem: 3-8)

Other courses may be substituted with program approval.

Last Revised by the Department: Fall Semester 2001

Review Date: 4/9/02

UCA Revision #1: 8/4/06

UCA Revision #2: 7/27/07

AL

Education Policy Studies Minor

University Park, College of Education (E P S)

This minor is designed to introduce students to the fundamental tenets of education policy development and analysis in both the U.S. and other countries. Students pursuing the minor may choose from courses on educational policy in the areas of higher education, educational administration, educational theory and policy, Native American education leadership and comparative/international education. The minor consists of a multidisciplinary program of study in areas of education related to numerous policy issues including social sciences, history, management sciences, and/or humanities. It is anticipated that students completing the minor will find these studies can enrich any major degree program and potentially provide opportunities for employment and/or graduate studies in state departments of education, ministries of education, federal and international education agencies, academic institutions, and various professional associations.

This 18-credit minor may be combined with any undergraduate major at Penn State.

A grade of C or better is required for all courses taken in fulfillment of the minor. No prerequisites are required for the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

EDTHP 115 US(3), EDPSY 14(3) (Sem: 1-4)

ADDITIONAL COURSES (12 credits)

Select 12 credits from: CIED 470(3), EDLDR 405(3), EDLDR 409(3), EDLDR 476(3), EDLDR 480(3), EDLDR 496(1-18), EDTHP 401 IL(3), EDTHP 447 US(3), EDTHP 416 US(3), EDTHP 420(3), EDTHP 427(3), EDTHP 430(3), EDTHP 440(3), EDTHP 441(3), EDTHP 496(1-18) (Sem: 5-8)

Last Revised by the Department: Summer Session 2006

Blue Sheet Item #: 34-06-261

Review Date: 4/11/06

ED

Equine Science Minor

University Park, College of Agricultural Sciences (EQ SC)

The Equine Science minor is designed for students who wish to supplement their academic major with studies in equine science. Students are required to complete a minimum of 20 credits. The core prescribed courses develop a foundation in the basic disciplines of animal science and equine science. Additional courses may be selected by the student to allow further specialization and expertise in exercise physiology and training principles, selection and judging, business/farm management, animal genetics and breeding, nutrition, and physiology. With completion of this minor, students will have a foundation of theoretical and practical knowledge along with learning skills for adapting to changes in equine industry. Courses that make up the minor are appropriate for students with and without prior academic or practical experience with horses. The University Horse Farms and the Agricultural Arena are used extensively for supplementing classroom work with hands-on laboratories. Completion of this minor will enhance a student's ability to work directly in horse production and management and allied industries, or continue academic studies in graduate or professional school.

A grade of C or better must be obtained in each course in order to complete the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 20-22 credits
(At least 6 credits must be at the 400 level.)

PRESCRIBED COURSES (12 credits)
ANSC 201(4), ANSC 217(2) (Sem: 1-4)
ANSC 327(3) (Sem: 5-8)
ANSC 407(3) (Sem: 7-8)

ADDITIONAL COURSES (8-10 credits)
Select 2 credits from: ANSC 37(2) or ANSC 107(2) (Sem: 1-4)
Select 3-4 credits from: ANSC 300 GN(3), ANSC 301(3), ANSC 317(3), ANSC 322(3), BA 250(3), KINES 180(3), KINES 202(4), or VBSC 403(3) (Sem: 5-8)
Select 3-4 credits from: AGRO 423(3), ANSC 419(3), ANSC 420(4), ANSC 423(3), ANSC 431(4), ANSC 437(3), ANSC 457(3) or ANSC 467(3) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-05-003

Review Date: 02/19/2013

AG

Early Development and Education Minor

Contact: James Johnson, jej4@psu.edu (ERDED_UMNR)

The Intercollege Minor in Early Development and Education builds upon existing courses across the university and especially ones found in the College of Education and the College of Health and Human Development. The minor affords the opportunity for students to study practices and policies informed by research and theory covering the period in human development from prenatal to three years. The minor prepares graduates majoring in a variety of fields such as education, human development and family studies, psychology, speech communication, nutrition, and others to have a deeper understanding of this period of the life cycle with an emphasis on the translation of this knowledge to applied settings.

A grade of C or better is required for all courses in the minor.

Some courses may require prerequisites.

For a Minor in Early Development and Education, a minimum of 20 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 20-21 credits

PRESCRIBED COURSES (8-9 credits)

ECE 451(3), ECE 453(2-3), ECE 479(3)

ADDITIONAL COURSES (6 credits)

CI 295(3); HDFS 330(3)

EDPSY 10 GS(3); EDPSY 11(3); HDFS 229 GS(3) (Sem: 1-5)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

CI 495(3); CSD 146(3); CSD 300(3); ECE 453(3); ECE/HDFS 454(3); HDFS 428(3); HDFS 430(3)

Treatment of Language Disorders

SPLD 415(3); PSYCH 410(3); PSYCH 474(3)

Blue Sheet Item #: 46-02-022A

Review Date: 10/3/17

Environmental Soil Science Minor

University Park, College of Agricultural Sciences (ESOIL)

The Environmental Soil Science minor enables students to acquire scientific and field-related skills in preparation for environmental careers. Students learn to understand and apply soils and land use information in a wide variety of professional settings. The Environmental Soil Science minor will prepare students for jobs as professional soil scientists or for graduate studies in Soil Science and other interdisciplinary environmental sciences.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-19 credits

PRESCRIBED COURSES (6 credits)

SOILS 101 GN(3), SOILS 102(1), SOILS 403(2) (Sem: 1-5)

ADDITIONAL COURSES (12-13 credits)

Select 12-13 credits from SOILS courses, or ASM 327(3), CE 335(3), ERM 433(3), ERM 440(3), FOR 475(3), TURF 434(3), TURF 435(4) in consultation with an Environmental Soil Science adviser, including at least 6 credits at the 400 level. (Sem: 2-8)

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-02-001

Review Date: 10/02/2012

AG

Ethics Minor

University Park, College of the Liberal Arts (ETHCS)

This interdisciplinary minor, housed in the Department of Philosophy, is designed to provide students with training in ethical frameworks and methods, as well as offer the opportunity to work in various fields of applied ethics. In addition to the requirements for the student's major department the minor consists of 18 credits selected from a wide range of disciplines (including philosophy, communication, engineering, law, psychology, sociology, anthropology, public policy, international studies, and environmental studies). Courses deal with ethics from various perspectives including research ethics, media ethics, environmental ethics, bioethics, and business ethics.

Students in the minor will begin with two core courses. The first will cover basic ethical approaches and the application of ethical analysis. The second will provide a grounding in ethical leadership. The core courses will be followed by a choice of other relevant ethics courses. The minor will be suitable for students in almost any major, especially students going on to further academic work or careers in medicine, communication, business, law, the health or life sciences, health administration, informatics or engineering.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

PHIL 103 GH(3), PHIL 119 GH(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from an approved list in consultation with the undergraduate adviser for the ethics minor. At least 6 credits must be at the 400 level. Courses must be selected from at least two different departments. (Sem: 5-8)

Last Revised by the Department: Summer Session 2009

Blue Sheet Item #: 37-04-023

Review Date: 1/13/09

LA

Film Studies Minor

University Park: Donald P. Bellisario College of Communications and College of the Liberal Arts (FLMST)

The joint minor in Film Studies sponsored by the Donald P. Bellisario College of Communications and the College of the Liberal Arts offers students in a variety of disciplines an opportunity to learn more about a visual medium that relates in many ways to other fields such as theatre, literature, history, and art. The focus of this minor is on critical, aesthetic, and historical studies of film, not on the art of filmmaking. The minor enables students to see how the medium influences--and is influenced by--disciplines outside their specialization. Courses listed for the minor give students a deeper appreciation of the historical development of film during the 20th century. Offerings on cinema from a variety of countries allow students to frame the medium in a global context.

The minor is housed in and administered by the Bellisario College of Communications but is jointly managed by the Film-Video and Media Studies Department and the French Department. The heads of these units or their designated representatives will chair on a rotating basis the Interdepartmental Film Studies Committee that will make decisions concerning requirements for the minor, including prescribed and supporting courses.

Students will choose an adviser from a list of committee members drawn from all participating areas--French, English, German, Italian, Comparative Literature, and Film/Video and Media Studies. In addition to two basic required courses (6 credits), students enrolled in the minor will take an additional 12 credits from a list approved by the Interdepartmental Film Studies Committee. Six of those credits must be at the 400 level. All required and most supporting courses are taught in English. Courses taught in a foreign language are indicated with a footnote.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

COMM 150 GA(3), COMM 250 GA(3) (Sem: 1-6)

SUPPORTING COURSES (12 credits)

Select 12 credits from an approved department list in consultation with an adviser (6 credits must be at the 400 level) (Sem: 5-8)

Last Revised by the Department: Summer Session 2004

Blue Sheet Item #: 32-05-044

Review Date: 3/2/04

CM/LA

Finance Minor

Penn State Abington - contact: Dr. Feng Zhang, fzz34@psu.edu

Penn State Erie, The Behrend College (FNC)- contact: Greg Filbeck, mgf11@psu.edu

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (6 credits)

FIN 301(3) and FIN 420(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS: (12 credits)

Select 12 credits in consultation with an adviser from ACCTG 426 or 300- or 400-level FIN courses. (At least 6 credits must be at the 400 level.) (Sem: 7-8)

Last Revised by the Department: Fall Semester 2001

UCA Revision #2: 7/27/07

BD

Forest Ecosystems Minor

University Park, College of Agricultural Sciences (FECO)

The Forest Ecosystems minor introduces students to the functions and values of forested ecosystems. After a prescribed foundation in tree and shrub identification and forest ecology, students may choose from a variety of related subjects including climate change, invasive species, tree physiology, agroforestry, fire ecology, forest soils, forest ecosystem management, forest measurements, community forestry, and global forest conservation.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-20 credits

PRESCRIBED COURSES: (6 credits)
FOR 203(3), FOR 308(3) (Sem: 3-6)

ADDITIONAL COURSES: (12-14 credits)

Select a minimum of 12 credits from the following FOR courses. Six credits must be at the 400-level.

FOR 200(1), FOR 201 GN(3), FOR 204(2), FOR 255(3), FOR 266(4), FOR 303(3), FOR 320(2), FOR 350(3), FOR 401(3), FOR 403(3), FOR 409(2), FOR 410(3), FOR 418(3), FOR 421(3), FOR/WFS 430(3), FOR 439(3), FOR 440(3), FOR 450(3), FOR 455(3), FOR 466(3), FOR 470(3), FOR 471(3), FOR 475(3), FOR 480(3), FOR 488(3) (Sem: 3-8)

Lasted Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-005

Review Date: 04/08/2014

AG

French and Francophone Studies Minor

University Park, College of the Liberal Arts (FR)

The French and Francophone Studies minor is designed to give students the opportunity to improve their knowledge of French language and culture (literature, civilization, film). Courses taken for the minor may also be counted for Basic Degree and major requirements.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)
FR 201 IL(3), FR 202 IL(3) (Sem: 1-6)

ADDITIONAL COURSES (6 credits)
Select 6 credits from a and b, or b and c, or a and c:
a) FR 316(3) (Sem: 1-6)
b) FR 331 IL(3) or FR 332(3) (Sem: 1-6)
c) FR 351 IL(3) or FR 352 IL(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)
Select 6 credits of 400-level French courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2006

Blue Sheet Item #: 34-06-319

Review Date: 4/11/06

LA

Geographic Information Science Minor

University Park, College of Earth and Mineral Sciences (G I S)

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

GEOG 160 GS(3) (Sem: 3-6)

ADDITIONAL COURSES (15 credits)

Select 6 credits from GEOG 361(3), GEOG 362(3), or GEOG 363(3) (Sem: 3-6)

Select 9 credits (at least 6 credits at the 400-level) from GEOG 323(3), GEOG 485(3), GEOG 461(3), GEOG 467(3), GEOG 417(3), GEOG 463(3), or GEOG 468(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2006

Blue Sheet Item #: 34-06-195

Review Date: 4/11/06

EM

Game Development Minor

Penn State Erie, The Behrend College (GAMBD)

Contact: Richard Zhao, richardzhao@psu.edu

Game Development is the craft of transforming a concept into an engaging interactive form. This craft is highly interdisciplinary, requiring students to answer questions about the human condition (what makes a game fun), about psychology (what makes an interface engaging), about aesthetics (what makes something pleasing), and about technical considerations (how to implement a game). Students pursuing the Game Development minor are required to explore a variety of disciplines in the breadth component. Often these classes will also be qualified as general education. Disciplinary depth in selected areas is achieved in the depth component. Finally, student teams complete a capstone design class, working in teams to complete a project from concept to implementation.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (9 credits)

GAME 220 GA(3) (Sem: 1-4)

GAME 250 GQ(3) (Sem: 2-4)

GAME 480(3) (Sem: 7-8)

ADDITIONAL COURSES: (9 credits)

Select 3 credits of 100 or 200-level GAME courses (excluding GAME 220 and 250); or PSYCH 244(3) (Sem: 1-4)

Select 6 credits of 400-level GAME courses (excluding GAME 480) (Sem: 5-6)

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-018

Review Date: 8/22/2017

Graphic Design

University Park, College of Arts and Architecture (GD)

The Graphic Design Minor is intended for students interested in augmenting their academic major with the physical, technological, aesthetic, and conceptual skills associated with a design discipline. Courses will include foundational emphasis on visual communications, design methodologies, image making, typography, and the production of work in both physical and digital form. Coursework may also include an introduction to communication theory, contemporary issues in communication, audience, and context, and formal research methodology. Advanced courses in the Minor Degree will apply the students' design acumen towards practical coursework within the context of their declared major. A Minor Capstone Studio will situate students within an appropriately rigorous environment for the application of design methods.

Entrance into the graphic design minor is based on a portfolio review. The portfolio will consist of examples of visual work, an original poster design, and a statement of intent.

A grade of C or better is required of all courses required in the minor.

For a minor in Graphic Design a minimum of 21 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES: (21 credits)
GD 100 GA(3), GD 101(3), GD 102(3) (Sem: 1-2)
GD 200(3), GD 201(3) (Sem: 3-4)
GD 405(3), GD 406(3) (Sem: 5-8)

Blue Sheet Item #: 44-04-007

Review Date: 1/12/2016

Geography Minor

University Park, College of Earth and Mineral Sciences (GEOG)

The Geography minor can complement most majors in the social sciences, physical sciences, biological sciences, and technical disciplines. The geography minor is flexible so that students can tailor their course choices to accommodate individual interests. A broadly based approach to selecting minor courses can be appropriate for students whose majors are highly specialized or narrowly focused. Alternatively, students may choose to fulfill geography minor requirements with a particular content emphasis, such as an interest in environmental issues or urban and regional planning. Looking through course choices and talking with geography staff can make earning the geography minor an important enhancement to one's academic program.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS (18 credits)

In consultation with a geography adviser:

- Select 3 credits in physical geography (Sem: 3-6)
- Select 3 credits in human geography (Sem: 3-6)
- Select 6 credits of additional geography courses (Sem: 3-6)
- Select 6 credits of 400-level geography courses (Sem: 5-8)

Last Revised by the Department: Summer Session 2000

Blue Sheet Item #: 28-04-090

Review Date: 11/01

EM

Geophysics Minor

University Park, College of Earth and Mineral Sciences (GPHYS)

The Geophysics minor provides the opportunity for students from outside the Geosciences to apply the physics, quantitative, and technical skills they are developing in their major program to the geophysical aspects of Earth Science, including seismology, volcanology, natural hazards, environmental geophysics, and petroleum and mineral exploration. For students majoring in Geosciences, the completion of the minor will strengthen their physics/quantitative background and develop links between theory and application for these technical and quantitative skills. The minor will prepare students for graduate programs in geophysics, and/or employment opportunities in the environmental and exploration industries. The minor consists of 18-20 credits satisfying the requirements below.

A grade of C or better is required for each course in the minor.

Recommended Scheduling by Semester Standing (e.g., Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 29-32 credits

PRESCRIBED COURSES (11 credits)

GEOSC 1(3), MATH 140 GQ(4), PHYS 212 GN(4) (Sem: 3-7)

ADDITIONAL COURSES (18-21 credits)

Select 4 credits from:

Non-Geoscience Majors (i.e., Math, Physics, Engineering):

GEOSC 203(4) (Sem: 3-7)

Geoscience Majors:

PHYS 212 GN(4) (Sem: 3-6)

Non-Geoscience Majors (i.e., Math, Physics, Engineering):

Select 3 credits from: GEOSC 1(3); GEOSC 10 GN(3); GEOSC 40 GN(3); GEOSC 109H GN(3); EARTH 2 GN(3); EARTH 101 GN;US(3); EARTH 105 GN;IL(3); EARTH 106 GN(3) (Sem: 1-4)

Select 11-13 credits from: GEOSC 402 IL(3); GEOSC 434(3); GEOSC 452(3); GEOSC 483(3); GEOSC 487(3); GEOSC 488(4); GEOSC 489(4) (Sem: 5-8)

Geoscience Majors: (Geoscience majors may not double count these courses in their major)

Select 3-4 credits from: MATH 220 GQ(2-3); MATH 230(4); MATH 231(2); MATH 232(2); MATH 250(3); MATH 251(4) (Sem: 3-6)

Select 11-13 credits from: GEOSC 402 IL(3); GEOSC 434 (3); GEOSC 452(3); GEOSC 483(3); GEOSC 487(3); GEOSC 488(4); GEOSC 489(4) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-01-059

Review Date: 8/25/2015

Geosciences Minor

University Park, College of Earth and Mineral Sciences (GEOSC)

The Geosciences minor provides a foundation in the physical and material aspects of the solid Earth, as well as an introduction to field techniques and technical writing. Advanced course work should reflect the students' individual interests. Areas of focus include, but are not limited to: earth materials, evolution of the Earth and life, hydrogeology, environmental geology, natural hazards, plate tectonics, geophysics, climate change. The minor consists of 18 credits of course work, some of which are filled through specific courses as indicated below.

A grade of C or better is required in each course in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (7 credits)

GEOSC 21 GN(3) (Sem: 1-6)

GEOSC 201(4) (Sem: 3-8)

ADDITIONAL COURSES (6 credits)

Select 3 credits from GEOSC 1(3), GEOSC 20 GN(3), or GEOSC 71(3) (Sem: 1-6)

Select 3 credits from GEOSC 470(3), EMSC 470(3-6) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (5 credits)

Select 5 credits from a number of courses covering a variety of disciplines and fields of interest. Consult with your adviser. At least 3 credits in this category must be taken at the 400 level; the remaining 2 credits may be at the 200 level or above. (Sem: 5-8)

Last Revised by the Department: Summer Session 2002

Blue Sheet Item #: 30-07-082

Review Date: 4/9/02

EM

German Minor

University Park, College of the Liberal Arts (GER)

The German minor is designed for students who want to study the language, literature, and culture of German-speaking countries in order to broaden their horizons and meet an increasing demand for people with foreign language skills and international expertise. German is one of the most important languages in Western Europe, being the mother tongue of approximately 100 million Europeans, and in the countries of Eastern Europe it is the most important foreign language of business and commerce.

The Department of Germanic and Slavic Languages and Literatures offers a wide array of courses in German language, literature and culture as well as in professional and business German, allowing students great independence in shaping their own academic program. Students are encouraged to take advantage of Penn State's study abroad opportunities, which include semester and year programs in Freiburg, Berlin, and Vienna plus summer and year programs in Marburg.

The German minor opens employment opportunities for its graduates in fields and professions where proficiency in one or more foreign languages is desirable or required, i.e., secondary and higher education, government, business, the media, and public relations.

All courses in the minor must be taught in German and the students must receive a grade of C or better.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES: (6 credits)

GER 301 IL(3), GER 302 IL(3) (Sem: 3-5)

ADDITIONAL COURSES: (7 credits)

GER 201 IL(4) or GER 208 IL(4) (Sem: 3-5)

Select 3 credits from GER 308 IL(3), GER 310 IL(3) and GER 344 IL(3) (Sem: 4-6)

SUPPORTING COURSES AND RELATED AREAS: (6 credits)

Select 6 credits of 400-level GER courses (Sem: 5-8)

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-05-119

Review Date: 02/22/2011

LA

Gerontology Minor

Intercollege Program (GERON)

University College: Penn State Brandywine, Penn State DuBois, Penn State Shenango

Contact: College of Health and Human Development, Devon M. Thomas, dmc233@psu.edu

The intercollege minor in Gerontology is designed for students to gain an in-depth understanding of the aging process and old age. With the growth of the number of older people in the population, increased need has arisen for people with knowledge of the aging process in a variety of professional and occupational roles. In conjunction with the student's major, the minor prepares students for entry-level human service positions working with the elderly, or for graduate or professional school programs including communication disorders, counseling, health planning and administration, medicine, psychology, recreation and park management, and social work where knowledge of the aging process and problems of older people is relevant. Eighteen credits are required for the minor, including at least 6 credits at the 400 level. Advising is available through Mrs. Devon M. Thomas, 315 Health and Human Development Building, University Park, PA 16802 (814-863-8000, dmc233@psu.edu).

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

HDFS 249 GS(3) (Sem: 3-8)

ADDITIONAL COURSES (6 credits)

BIOL 155 GN(3) or SOC 35(3) and SOC 435 (HDFS 434) (3) or HDFS 445 (PSYCH 416) (3) (Sem: 1-7)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from: ADTED 460(3), AYFCE/CIED 845(3) (must be approved by the graduate school), BBH 316(3), BBH 410(3), BBH/HPA 440 US;IL(3), BIOL 155 GN(3), CAS 421(3), HPA 101(3), HPA 332(3), HPA 442(3), HDFS 413(3), HDFS 445 (PSYCH 416)(3), HDFS 446(3), HDFS 447(3), HM 306(3), KINES 465(3), KINES 481(3), NURS 115(1), NURS 310(3), NURS 464(3), RM 401(3), SOC 35(3), SOC 423(3), SOC 435(3) (Sem: 3-8)

Note: Students may enroll in special topics courses (297, 497) that focus on aging or old age, with faculty permission. With faculty approval, students may also enroll for independent studies in their major department to write a senior thesis focused on an issue of aging.

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-004

Review Date: 8/23/16

UCA Revision #1: 8/16/06

UE

Global Health Minor (GLBHL)

University Park, College of Health and Human Development (GLBHL)

Contact: Dr. Dana Naughton, Director, dmn161@psu.edu

The Global Health Minor (GLBHL) is designed to provide undergraduate students with a multidisciplinary exposure to the theoretical and practical issues affecting the health of populations in various countries and regions of the world. This minor is appropriate for students whose career goals incorporate public health interventions, education, policy or research related to global health. Course work and supervised field work will draw on the diversity and abundance of the Penn State faculty's international resources and networks.

Students desiring to enter the minor must submit an application to the Director. Applications to the Global Health Minor:

- must have declared a major field of study
- must include with the application a proposed plan of study. This plan should include the student's contact information and GPA, a brief statement about the relationship of this minor to the student's major plan of study and career goals, a list of proposed supporting courses, and a proposed supervised fieldwork experience. The student's application to the minor must be signed by the student's academic/faculty adviser.
- previously completed course work and/or supervised fieldwork experience may be retroactively included in the plan of study if approved by the Director of the minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1 - 2)

REQUIREMENTS FOR THE MINOR: 27-28 credits

PRESCRIBED COURSES (18 credits)

BBH 101 GHA(3), BBH 305 IL(3), BBH 390A(3), BBH 390B(6), and BBH/HPA 440 US;IL(3) (Sem: 4-6)

ADDITIONAL COURSES (3-4 credits)

STAT 200 GQ(4) or STAT 250 GQ(3)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits from the list of approved supporting courses in consultation with the Global Health Director, with at least 3 credits at the 400 level. Other courses (e.g. special topics courses, independent study) that are not on the list of approved supporting courses may also be used to meet the credit requirements for the GLBHL minor. However, all course substitutions require approval of the Director. (Sem 5-8)

SUPERVISED FIELDWORK EXPERIENCE

An approved, supervised fieldwork experience dealing with a global health issue is a requirement of this minor (BBH 390B). BBH 390A must be taken prior to this field experience. Global health field sites may be international or domestic, but must be approved by the Director. (Sem: 6)

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-03-041

Review Date: 11/17/2015

Global Security Minor

*University Park, College of Information Sciences and Technology
University Park, College of the Liberal Arts (GLBSC)*

The Global Security Minor will be jointly offered by the College of Information Sciences and Technology and the College of the Liberal Arts and overseen by the Department of Political Science. This joint minor is intended to provide students with a background of the theoretical frameworks and skill sets needed to understand the concepts essential to security and related analyses; the challenges and problems faced when dealing with threats to security (e.g., technology, policies, and regulations); and the strengths and weaknesses of various methods of analyzing and responding to challenges to security. The minor includes a grounding in social, historical, and cultural factors that underlie both conflict between states and conflicts between state and nonstate actors, as well as the legal, ethical, and regulatory issues related to security.

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-33 credits [\[1\]](#)

PRESCRIBED COURSES: (9 credits)

SRA 111 GS(3), SRA 211(3), PLSC 7 GS(3) (Sem: 1-8)

ADDITIONAL COURSES (6 credits)

Select 6 credits from PLSC 410(3), PLSC 415(3), PLSC 418(3), PLSC 437(3), PLSC 438(3), PLSC 439(3), PLSC 442(3) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (3-18 credits)

Select 0-13 credits: 12th-credit-level proficiency in one foreign language demonstrated by course work or examination.

Select 3 credits from COMM 490(3), COMM 491(3), COMM 492(3), GEOG 424 US;IL(3), GEOG 428 US(3), GEOG 463(3), GEOG 464(3), HIST 420 IL(3), HIST 434 IL(3), HIST 452 US;IL(3), HIST 467 US;IL(3), HIST 473 IL(3), HIST 475 IL(3), HIST 479 IL(3), HIST 486 IL(3), or 3 credits of appropriate internship work in consultation with adviser (Sem: 4-8)

Last Revised by the Department: Fall Semester 2007

Blue Sheet Item #: 35-06-459

Review Date: 4/10/07

LA

Global Studies Minor

Berks College (GLBST)

The minor in Global Studies is intended to prepare students from all degree programs within the Berks College (with the exception of the major in Global Studies) to gain a global perspective, which would be useful in a variety of workplace and academic settings. HIST 320W, PL SC 014, and CAS 271 provide the necessary background to help students understand and appreciate broad issues of international concern. A combination of more specific option courses will deepen students' experience of the world and enhance analytical and interpersonal skills. Eighteen credits are required for the minor in Global Studies. All students taking this minor will be required to show a 12-credit-level proficiency in a foreign language.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-30 credits

ADDITIONAL COURSES (18-30 credits)

Select 6 credits from CAS 271 US;IL(3), HIST 320W(3), PLSC 14 GS(3) (Sem: 1-6)

Select 12 credits from the following list; at least 6 credits must be at the 400 level:

FR 139 GH;IL(3), GER 100 GH;IL(3), RUS 100 GH;IL(3), SPAN 100(3), SPAN 130 GH;IL(3), SPAN 131 GH;IL(3) or SPAN 131 GH;US;IL(3), SPAN 132 IL(3), UKR 100 GH;IL(3) (Sem: 1-4)

HIST 179 GH;IL(3), HIST 181 GH;IL(3), HIST 192 GH;IL(3), HIST 467(3), HIST 468(3) (Sem: 1-6)

ENGL 403(3), HIST 488(3), PLSC 412(3) (Sem: 3-6)

HIST 120 GS(3), HIST 175 GH;IL(3), PLSC 413(3), PLSC 454 IL(3) (Sem: 3-8)

HIST 435(3), PLSC 424(3), PLSC 487(3), SPAN 200(3), SPAN 220(3), SPAN 253W(3), SPAN 300(3), SPAN 420(3), SPAN 476(3) (Sem: 5-8)

Foreign Language Requirement: Proficiency in a single foreign language must be demonstrated by either examination or coursework equivalent to completion of 12 credits of coursework. See the ADMISSION section of the General Information in this Bulletin for the Placement Policy for Penn State Foreign Language Courses (under Opportunities for Credit by Acquisition) (0-12) (Sem: 1-8)

Last Revised by the Department: Fall Semester 2004

Blue Sheet Item #: 32-05-011

Review Date: 10/11/04

UCA Revision #2: 7/27/07

BK

Global Language and Culture Minor

Penn State Altoona (GLC)

The minor in Global Language and Culture allows students to create an interdisciplinary program combining language study beyond the 12-credit level, an academic or internship experience abroad, and additional courses chosen to complete a thematic area of concentration. The GLC minor recognizes that students from all degree programs can benefit from developing intercultural competencies. It encourages students to deepen and enhance their understanding of another culture by developing advanced linguistic skills, completing a related experience abroad, and integrating both into an area of concentration of the student's choice. Applications to the minor must present a proposed plan of study that includes a clear geographic or thematic focus; this plan must be approved by the adviser for the minor. Students may apply toward the minor no more than nine credits from their major requirements.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-20 credits

Language Requirement: Students must complete at least 6 credits beyond the 12-credit proficiency level in a single foreign language.

Study Abroad Requirement: Students must complete one of the following two options.

- a) At least 6 credits as participants in a single approved Penn State education abroad program, in a country in which the chosen language is one of the major languages spoken.
- b) At least 6 credits of a single accredited internship abroad, in a country in which the chosen language is one of the major languages spoken.

Courses taken abroad may be taught either in English (for thematically related courses) or in the target language.

When taken abroad, language courses below the 12-credit level may be used to fulfill the study abroad requirement, but will not count towards the 18 credits for the minor.

ADDITIONAL COURSES (12 credits)

At least 6 credits, or as many as needed to complete the 18 credits for the minor after the above two requirements have been met.

Students must select these courses to complete a geographic or thematic concentration. The rationale for the inclusion of these courses must be described in the student's proposed plan of study, and approved by the advisor for the minor. Courses may be chosen from, but are not limited to, the fields of anthropology, art, communications, history, international studies, international business, literature, political science, or a variety of other disciplines related to international culture.

At least 6 credits for the minor must be at the 400-level. 400-level courses may be completed either abroad or at Penn State, and may be either in English or in the target language.

Blue Sheet Item #: 44-04-005

Review Date: 1/12/16

Greek Minor

University Park, College of the Liberal Arts (GREEK)

The Greek minor focuses on establishing proficiency in reading and interpreting classical Greek literature. After completing an introductory course sequence (elementary classical Greek) that teaches students the vocabulary, morphology and syntax of classical Greek, students complete at least six credits in Greek language and literature at the 400-level for a total of 18 credits for the minor. In advanced courses in Greek language and literature, students gain analytical and interpretive skills by reading a wide range of classical Greek literature, including Greek drama, history, and philosophy, as well as the Greek New Testament. Students minoring in Greek will find their studies mesh well with a number of majors and graduate fields, including anthropology, archaeology, history, English, comparative literature, philosophy, and law.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS: (18 credits)

Select 12 credits of GREEK courses (Sem: 1-8)

Select 6 credits of 400-level GREEK courses (Sem: 5-8)

Last Revised by the Department: Summer Session 2001

Blue Sheet Item #: 29-05-036

Review Date: 11/01

LA

Health Policy and Administration Minor

*University Park, College of Health and Human Development (H P A)
University College, Lehigh Valley*

Contact: University Park - Mark Sciegaj, mxs838@psu.edu; Lehigh Valley - Anita Yuskas, auy10@psu.edu

The minor in Health Policy and Administration (H PA) is designed to provide students with a background in the policy issues and administrative challenges related to quality, cost, and access to health care. The minor is most appropriate for students interested in clinical and health-related fields (e.g., nursing, nutrition, biobehavioral health, or medicine), professional fields (e.g. business administration or law), or the social sciences (e.g., economics, sociology, political science, psychology), giving these students an understanding of the health care industry and the impact of business and government on that industry.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)
HPA 57 GHA(3) and HPA 101(3) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 3-6 credits from HPA 210(3), HPA 211(3), HPA 301(3), HPA 310(3), HPA 311(3), HPA 332(3) (Sem: 3-6)
Select 6-9 credits from 400-level HPA courses (Sem: 5-8)

Note: Some courses have additional prerequisites that must be met.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-06-028

Review Date: 4/4/17

HH

Human Development and Family Studies Minor (HD FS)

Contact: Abington College, Michael Bernstein, mib70@psu.edu; Altoona College, Lauren Jacobson, lpj100@psu.edu; Penn State Harrisburg, Barbara Carl, bec109@psu.edu; College of Health and Human Development, Devon M. Thomas, dmc233@psu.edu; Penn State York, Dr. JeanMarie St. Clair-Christman, jxs176@psu.edu

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

HDFS 129 GS(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 9 credits of HDFS courses (Sem: 1-6)

Select 6 credits of 400-level HDFS courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

Hebrew Minor

University Park, College of the Liberal Arts (HEBR)

The minor in Hebrew is intended to provide students with a good working knowledge of the Hebrew language, taught in a context that emphasizes the characteristics of Jewish tradition and Israeli culture and society. Students undertake three years of language study (or equivalent); education abroad can be included.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (12 credits)

HEBR 1(4), HEBR 2(4), HEBR 3(4) (Sem:1-4)

ADDITIONAL COURSES (9 credits)

Select 3 credits from: HEBR 151(3), HEBR 152(3), HEBR 199 IL(1-12) HEBR 296(1-18), HEBR 297(1-9), HEBR 399 IL (1-12), JST/HEBR 10 GH;IL(3), JST 12 GH;IL(3) (Sem: 1-8)

Select 6 credits from HEBR 401(3-6), HEBR 402(3-6), HEBR 451(3), HEBR 452(3), HEBR 496(1-18), HEBR 497(1-9), HEBR 499 IL(1-12) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-028

Review Date: 10/7/2014

LA

History Minor (*HIST*)

Contact: Abington College, Andrew August, axa24@psu.edu; Altoona College, Marc Harris, mlh6@psu.edu; College of the Liberal Arts, Mike Milligan, mjm61@psu.edu; Penn State Berks, Randall Fegley, raf8@psu.edu; World Campus

The minor in history is designed to complement a wide range of social studies and humanities majors by affording students the opportunity to examine change and development in human societies over time. Students are free to select courses in the topics (military history, social history, cultural history, etc.), geographical areas (the United States, Latin America, Europe, Asia, and Africa), and time periods that most suit their needs and interests. The requirements for entering the minor are fifth semester standing (eligible courses taken previously will count toward the minor) and having already declared a major.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS: (18 credits)

Select 12 credits of HIST courses (Sem: 1-8)

Select 6 credits of 400-level HIST courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

Homeland Security Minor (HLS)

*Penn State Harrisburg - Program Coordinator, Dr. Alexander Siedschlag
Penn State World Campus*

The Homeland Security minor provides for development of familiarity with homeland security and defense issues, including emergency management, homeland security policy, and the structure of homeland security operations. Students will come to understand the "all hazards" approach to homeland security and defense. Students will be able to develop familiarity with such aspects of homeland security and defense as emergency management, security administration, border security, and critical infrastructure through taking elective courses. Recipients of the minor would be positioned to enter the work force in entry level positions or to prepare for transition to graduate school.

A grade of C or better is required in all courses for the minor. At least six credits must be at the 400 level.

Scheduling recommendation by semester standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (9 credits)

PUBPL 201(3) (Sem 2-5)

PLSC/CRIMJ 439(3), PUBPL 483(3) (Sem 5-8)

SUPPORTING COURSES AND RELATED AREAS: (9 credits)

Select 9 credits from among the following: CRIMJ 304(3), CRIMJ 435(3), PUBPL 306(3), PUBPL 475(3) (Course substitution possible with permission of advisor) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-06-041

Review Date: 04/12/2011

Horticulture Minor

University Park, College of Agricultural Sciences (HORT)

The minor in Horticulture consists of a minimum of 18 credits. A grade of C or better is required in all courses used for the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

HORT 101(3), HORT 202(3), HORT 315(3) (Sem: 1-6)

ADDITIONAL COURSES (9 credits)

Select 3 credits in systematics from HORT 131(3), HORT 137(3), HORT 138(3), or HORT 232(3) (Sem: 3-4)

Select 6 credits in foundation and production courses from HORT 402(3), HORT 407(3), HORT 412(3), HORT 420(3), HORT 431(3), HORT 432(3), HORT 433(3), HORT 450(3), HORT 453(3), HORT 455(3), or HORT 459(3) (Sem: 7-8)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

AG

Human Resource Management Minor

Capital College, School of Business Administration (HRMGT)

The Human Resource Management minor prepares students for professional certification (Assurance of Learning, Professionals in Human Resources (PHR) or Senior Professionals in Human Resources (SPHR)) and/or a career in human resource management by developing skills and competencies in managing diversity and equal opportunity, ethical and fair treatment of employees, human resource planning and staffing, employee training and development, compensation and benefits, performance management, labor relations, and protecting employee safety and health.

No more than 15 credits from the minor may be utilized to fulfill the Management major requirements.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 20-22 credits

PRESCRIBED COURSES (9 credits)

Organizational Behavior and Structure (3 credits)

MGMT 301(3) (Sem: 1-2)

Basic and Advanced Human Resource Management (6 credits)

MGMT 341(3) (Sem: 5-6)

MGMT 440(3) (Sem: 6-8)

ADDITIONAL COURSES (2-4 credits)

Legal Environment (2-4 credits)

BA 241(2), BA 243(4), BLAW 243(3), BLAW 341(3), LER 201 GS(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from the following list. At least 3 credits must be taken at the 400-level.

LER 424(3), LER 425(3), MGMT 321(3), MGMT 400(3), MGMT 420(3), MGMT 424(3), MGMT 441(3), MGMT 443(3), MGMT 445 US(3), MGMT 450(3), MGMT 483(3) (Sem: 6-8)

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-02-020

Review Date: 10/08/2013

History Minor

Penn State Erie, The Behrend College (HSTRY)

Contact: Eric corty, ewc2@psu.edu

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 12 credits of HIST or HSTRY courses (Sem: 1-8)

Select 6 credits of 400-level HIST or HSTRY courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

BD

International Business Minor

University Park, Austin Jaffe, ajj@psu.edu, Smeal College of Business (I B)

The International Business minor provides students with knowledge, skills, and experiences that prepare them for a business career that might include international responsibilities. Mastery of fundamental business concepts, coursework in international business or economics, foreign language skills, and an approved study abroad experience each contribute to build perspectives about the challenges and opportunities of commercial activity in a global business environment.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 33-37 credits

PRESCRIBED COURSES (7 credits)

ACCTG 211(4) (Sem: 1-4)

BA 411(3) (Sem: 5-8)

ADDITIONAL COURSES (14 -18 credits)

MGMT 301(3) or BA 304(3) (Sem: 2-5)

MKTG 301(3) or BA 303(3) (Sem: 3-5)

FIN 301(3) or BA 301(3) (Sem: 4-5)

SCM 301 (3) or BA 302(3) (Sem: 4-5)

Select 6 credits from the following with at least 3 credits at the 400 level: IB 303(3), IB 403(3), IB 404(3), IB/PLSC/AFR 440(3), IB 450(3), or IB 460(3)(Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 6 credits from an education abroad program with prior approval by the Smeal College International Programs Office. (Sem: 4-7)

Select 6 credits of supporting coursework in consultation with the Smeal College International Programs Office. See Program List. (Sem: 5-8)

Last Revised by the Department: Spring Semester 2011

Blue Sheet Item #: 39-05-012

Review Date: 02/22/2011

UCA Revision #1: 8/8/06

BA

International Arts Minor

University Park, College of Arts and Architecture (IARTS)

This interdisciplinary minor is designed for students in any major of the University who wish to supplement their knowledge of the arts of a country or countries other than the United States.

Students enrolled in the minor shall begin by taking the International Arts course and complete the minor with a project pertaining to topics studied for the minor.

Credits applied toward the minor shall represent at least two disciplines and should consist of a coherent selection of courses relating to a geographic, chronological, or thematic concentration.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19-33 credits

PRESCRIBED COURSES (4-6 credits)

AA 100 GA;IL(3) (Sem: 3-6)

AA 401(1-3) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (15-27 credits)

Select 0-12 credits: 12th-credit-level proficiency in one foreign language demonstrated by course work or examination (Sem: 1-4)

Select 15 credits of international arts courses (Only 9 credits in a single discipline may apply toward the minor. A minimum of 9 credits must be taken in the College of Arts and Architecture. At least 6 credits must be at the 400 level. At least 3 of these 15 credits must be in a study abroad experience of at least 4 weeks in duration approved by the person in charge of the minor; any arts courses taken while abroad may count toward the minor.) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2004

Blue Sheet Item #: 32-06-014

Review Date: 4/13/04

AA

International Engineering Minor

College of Engineering (IENGR)

The International Engineering Minor is paired with any engineering baccalaureate major at any campus in order to provide students with an opportunity to learn about, and understand their profession in a global context. It is designed to provide students with knowledge, language skills, and experiences to help prepare them for a professional career that is likely to include collaborations with professionals from various parts of the world. The minor will help students understand the cross-cultural communications challenges and the global arena in which their profession is practiced. Students completing this minor will gain a competitive advantage because they will be able to demonstrate a broader understanding of the role of their profession and will have demonstrated their ability to communicate across cultural lines.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

ECON 333 GS(3) (Sem: 2-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Demonstrate language skills in a currently spoken world language other than English. Students must take a minimum of 6 credits in the same language, at a level determined by the Language Placement Policy, and achieve a minimum of 12th-credit proficiency in that language. Transfer credits for language courses taken prior to enrollment at Penn State may not be used. (Sem: 1-6)

Select 3 credits of Engineering/computer science courses with significant international content from a program list or as approved by the director of the program. (Sem: 2-8)

Select 6 credits of 400-level engineering or computer science courses, in consultation with departmental undergraduate coordinator, to be taken abroad at an international institution and taught by faculty at that institution. (Sem: 5-8)

Last Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-05-045

Review Date: 02/25/2014

Global and International Studies Minor (INSTD)

Contact: Abington College, Fran Sessa, fms11@psu.edu; Penn State Brandywine, Paul Greene, pdg4@psu.edu; Worthington Scranton, John Dolis, jld3@psu.edu; College of the Liberal Arts, Henry Morello, hum1@psu.edu

The International Studies minor is intended to recognize, for undergraduate students in any major, the completion of an education abroad program, foreign language competency, and related advanced course work. Ideally, the language, international, and advanced study should be integrated around some thematic or geographical focus.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-30 credits

SUPPORTING COURSES AND RELATED AREAS (18-30 credits)

12th-credit-level proficiency in one foreign language demonstrated by course work or examination (Sem: 1-4)

Students must complete 12 credits as participants in an approved Penn State Education Abroad Program, no more than 6 credits of which may be foreign language study beyond the 12-credit level (Sem: 5-6)

Select 6 credits (400 level) related to the education abroad experience, or the student's major, or to complete a thematic concentration. Courses must be selected from the approved list of courses with international focus or in consultation with the International Studies Minor adviser (Sem: 5-8)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-03-051

Review Date: 11/15/16

International Agriculture Minor

University Park, College of Agricultural Sciences (INTAG)

This minor is an interdisciplinary program of study designed to enable students to (1) gain an awareness and appreciation for the interrelationship and interdependency of the nations of the world for their food and fiber systems worldwide; (2) gain awareness of problems in international agriculture and sustainability of alternative solutions; (3) understand global impacts of technology, and (4) understand systems of learning across cultures.

This minor requires 18 credits and may be combined with any undergraduate major in the University. Some courses require prerequisites not included in the minor. Foreign language competence is highly recommended.

Students may apply for admission to the minor by completing and submitting an application for admission to Office of International Programs, College of Agricultural Sciences, 106 Administration Building, University Park campus. A signature from the student's major program adviser is required.

A grade of C or better is required for all courses in the minor. Students must have six credits of 400-level course work for the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

INTAG 100 GS;IL(3), INTAG 490(3) (Sem: 6-8)

ADDITIONAL COURSES (12 credits)

Select three courses from the first two categories (9 credits) and one internationally-oriented experience from the third category (3 credits):

Category 1: Social Sciences (Select up to two courses from this category; 3-6 credits)

AEE 400(3), AGBM 338 IL(3), ANTH 120 GS;IL(3), ANTH 472(3), BBH 305(3), BBH 402 IL(3), BBH 407 IL(3), CED 230(3), CED 420 US;IL(3), CED 425(3), CED 450 IL(3), GEOG 3 GN;GS(3), GEOG 30N GS;IL(3), GEOG 123 GS;IL(3), GEOG 126 GS;US;IL(3), GEOG 220(3), GEOG 430(3), GEOG 444(3), NUTR 421 US;IL(3), NUTR 425 IL(3), NUTR 430 IL(3), SPAN 105(4), SPAN 106(4), WMNST 420 US;IL(3), any university language skill development course (Sem: 1-8)

Category 2: Natural Sciences (Select up to two courses from this category; 3-6 credits)

AFR 105 GN;IL(3), AGECO 3(3), AGECO 457(3), EARTH 2 GN(3), ENT 202 GN(3), ENT 222 GN(3), ENT 457(3), ERM 210 GN(3), FDSC 105(3), FOR 201 GN(3), FOR 418 US;IL(3), FOR 488 IL;WAC(3), GEOG 210 GN(3), GEOSC 105 GN;IL(3), INTAG 300 IL(3), PPEM 405(3), SOILS 71 GN;IL(3) (Sem: 1-8)

Select international experience (3 credits)

AGBM 470A(2.5), AGBM 470B(0.5), AGECO 499 IL(1-2), ANSC 499 IL(1-12), CED 499 (1-12), ERM 499(1-12), FDSC 460(1), FDSC 499 IL(1-12), HORT 499 IL(1-12), INTAG 199 IL(1-12), INTAG 200(3), INTAG 470A (2.5), INTAG 470B(0.5), INTAG 499 IL(1-12), SOILS 499 IL(1-12), VBSC 499 (0.5-4)

Students are given the option of participating in a semester study abroad program that would be discussed and approved by the INTAG coordinator and the student's academic advisor. Twelve credits maximum can count toward the minor, and should normally only fulfill elective and internationally-oriented experience credits, and not replace prescribed credits for the minor. The semester study abroad program needs to focus on courses within the food, agriculture or natural resources areas.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-02-003

Review Date: 10/3/2017

AG

Contact information updated: 1/5/12

International Business Administration Minor

Capital College (IBADM)

Contact: Jane Kochanov, jxs121@psu.edu

This minor provides undergraduate students in all business administration majors with further studies in such areas as international accounting, finance, information systems, comparative management, international marketing, or economics. The objective of the minor is to provide students who are interested in careers in international business with an understanding of problems and problem-solving methods that transcend national boundaries. Proficiency in a foreign language and study abroad provide an understanding of the social, political, and cultural context of the global marketplace. Except for Accounting, the minor can be included in the major with no additional courses being required. Professional Accountancy students may have to take 12 additional credits.

Students must receive a grade of C or better in all courses required for the minor.

Scheduling Recommendation by Semester Standing given like (1-2)

REQUIREMENTS FOR THE MINOR: 18-24 credits

(A minimum of 3 credits in the minor must be taken in an approved study abroad program.)

PRESCRIBED COURSES (3 credits)

BA 364 US;IL(3) (Sem. 7-8)

SUPPORTING COURSES AND RELATED AREAS (15-21 credits)

Select 3-12 credits in a single foreign language equivalent to the 12th credit level (Sem: 1-6)

Select 9-12 credits from ACCTG 461 IL(3), ECON 333 GS(3), FIN 407(3), FIN 456 IL(3) or IB 299 IL(3), MGMT 461 IL(3), MIS 446(3), MKTG 445 IL(3) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-027

Review Date: 08/20/13

UCA Revision #1: 8/8/06

UCA Revision #2: 7/27/07

CL

Transnational Perspectives Minor

Penn State Erie, The Behrend College (TNTLP)

Contact: *Jessica Piney, jup33@psu.edu*

This interdisciplinary minor is designed for students who wish to supplement their major field of study with international understanding and study. It introduces students to global concerns and multicultural issues and broadens students' understanding of the critical forces molding their nation and their lives in the twenty-first century. The Transnational Perspectives Minor is proposed for students planning international careers in their professional fields, careers in organizations engaged in international activity, and those with a general interest in global studies. The minor consists of 18 to 30 credits, at least 6 of which must be at the 400 level. Twelve credits or evidence of third-semester proficiency of a foreign language is required. The program of study is to be developed by the student in conjunction with an International Studies adviser. A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

PRESCRIBED COURSES (18 credits)

INTST 100 GS;IL(3) (Sem: 1-4)

Select 12 credits of a foreign language or evidence of third-semester proficiency (Sem: 1-4)

INTST 400 IL(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Students may select 12 credits of internationally oriented courses in consultation with adviser. A list of recommended courses is maintained by Penn State-Behrend's Transnational Perspectives Committee. At least 3 credits must be at the 400 level (outside the student's major). Credits earned through approved academic study abroad may be counted in this category. (Sem: 1-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-022

Review Date: 08/20/13

BD

Information Sciences and Technology for Accounting Minor

Capital College (ISACC): Penn State Harrisburg

Accounting remains a vital organizational function which, in today's business environment, impacts the strategic direction of the firm. Technology has changed the manner in which business organizations are supported by accounting. Thus, accounting professionals with technology skills and technology professionals with accounting skills are extremely valuable in today's modern organization. This new minor will provide students with this integration of knowledge in these two fields.

Students must apply for entrance to the minor no later than the beginning of their sixth semester.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (18 credits)

IST 110 GS(3), IST 210(3), IST 220(3) (Sem: 1-8)

ACCTG 403(3), ACCTG 432(3), ACCTG 471(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)

Select 3 credits from ACCTG 310(3), ACCTG 340(3), ACCTG 472(3) (Sem: 6-8)

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-01-057

Review Date: 8/25/2015

UCA Revision #2: 7/27/07

CL

Information Sciences and Technology for Aerospace Engineering Minor

University Park, College of Engineering (ISASP)

The role of Information Sciences and Technology in the practice of Aerospace Engineering is very important. Aerospace systems rely heavily on computers, software, and digital information; for control, sensors, and other onboard systems. The Boeing 777 has more than 1000 processors and roughly 20 million lines of software onboard, and F-16 and F-117As cannot fly without their onboard computers. In addition, many future aerospace vehicles will be unmanned, and the software challenges will be even greater. The onboard memory has also increased exponentially, the F-106 had 20 KBytes of memory and the new Joint Strike Fighter might have 2 GBytes of memory. The hardware and software must be carefully designed and thoroughly tested, since most aerospace systems are mission- or safety-critical systems. Computers and software are heavily used in the design, development, and manufacturing of aerospace systems. Large supercomputers are often used in the design process. The IST minor will enrich their educational achievements and increase their chances in obtaining employment or entering graduate school. The NSF and the DOD are encouraging universities to enhance their educational programs so that we have well-qualified engineers for future systems, and our IPAC members have stressed the importance of IT for our students.

Student must apply for entrance to the minor no later than their 7th semester.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (13 credits)

CMPSC 201(3), IST 110 GS(3) (Sem: 1-4)

IST 210(3), IST 220(3) (Sem: 5-6)

ADDITIONAL COURSES (6 credits)

Select 6 credits from: AERSP 423(3), AERSP 424(3), AERSP 440(3), or AERSP 460(3) (Sem: 5-8)

Last Revised by the Department: Spring 2015

Blue Sheet Item #:43-06-080

Review Date: 4/14/2015

UCA Revision #2: 7/26/07

[Comments](#)

EN

Information Sciences and Technology for Communication Arts and Sciences Minor

University Park: College of the Liberal Arts (ISCAS)

The Internet and other technologies are emerging as important communication channels. People establish personal relationships, develop language skills, conduct business, and make arguments online. Web sites have become important sites of public discourse and are playing an encompassing role in political campaigns. Students who pursue careers as communication consultants, in management or human resources, as political speech writers, and as independent business operators need information management skills. As a result, it is essential for Communication Arts and Sciences students to be fully versed in information sciences and technology for both personal and professional advancement.

A grade of C or better is required for all courses in this minor.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

IST 110 GS(3) (Sem: 1-2)

IST 210(3) (Sem: 3-4)

IST 220(3) (Sem: 5-6)

ADDITIONAL COURSES (9 credits)

Select 9 credits of CAS courses from a department-approved list with at least 6 credits at the 400 level. (Sem: 5-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-03-089

Review Date: 11/18/2014

IST/LA

Information Sciences and Technology for Earth and Mineral Sciences Minor

University Park, College of Earth and Mineral Sciences (ISEMS)

Information Systems are a core component of any research, educational or industrial enterprise in the Earth and Materials Sciences. In addition, the science and engineering disciplines represented in the College have a particular focus on numerical modeling and simulation systems, and on the analysis and management of very large data sets. The EMS - IST minor provides students a basic introduction to information sciences and information technology through courses in the core curriculum of the School of Information Sciences and Technology. Students then select from a group of interdisciplinary EMS courses that focus on the particular interests of the College.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (13 credits)

IST 110 GS(3) (Sem: 1-2)

IST 210(3) (Sem: 3-4)

IST 220(3), GEOG 463(3) (Sem: 5-6)

ADDITIONAL COURSES (6 credits)

Select 6 credits from GEOG 461(3), GEOG 464(3), GEOG 485(3), MATSE 419(3), METEO 473(3), METEO 474(3), PNG 430(3) (Sem:5-8)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-05-051

Review Date: 02/24/2015

Information Sciences and Technology/Finance Minor

Capital College (ISFIN)

The Information Sciences and Technology/Finance Minor is to enhance skills of students in the information sciences and finance. More organizations are integrating technology as part of their business operations, including finance. Finance is a key function of every business organization. Therefore, technology professionals with finance skills, and finance professionals with technology skills are highly valuable in any organization.

Students must apply for entrance to the minor no later than the beginning of their seventh semester.

A grade of C or better is required for all courses to successfully complete the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (18 credits)

IST 110 GS(3), IST 210(3), IST 220(3) (Sem: 1-8)

ECON 351(3), FIN 301(3), FIN 420(3) (Semester 5-8)

ADDITIONAL COURSES (3 credits)

Select 3 credits from FIN 302(3), FIN 406(3), FIN 407 (3), FIN 408(3), FIN 409(3), FIN 427(3), FIN 456 IL(3), FIN 496(3), FIN 497(3) (Semester 6-8)

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-01-048

Review Date: 8/25/15

UCA Revision #2: 7/27/07

CL

Information Sciences and Technology in Health Policy and Administration Minor

University Park, College of Health and Human Development (ISHPA)

Contacts: Health and Human Development -Caroline Condon-Lewis, cxc29@psu.edu; Information Sciences and Technology - Jean Peritz, jperits@ist.psu.edu

The learning objectives of the minor in Information Sciences and Technology in Health Policy and Administration (ISHPA) are to equip students with the skills and knowledge to meet the critical need for persons with expertise in health care information technology. Specialists in this field assist health care organizations develop and apply the information technologies needed to develop Web-based systems for patient education, physician-patient interaction and physician-physician consultation, securely transmit sensitive medical information electronically, and even pioneer efforts for advanced technologies like remote robotic surgery. The ISHPA minor provides students with a solid base in the information sciences and technology through courses in IST's core curriculum. This core is then supported by selections from a group of HPA courses studying the application of information technology in health planning, financing, or marketing. Students must apply for entrance to the minor no later than the beginning of their seventh semesters.

A grade of C or better is required for all courses in this minor.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

REQUIREMENT FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

IST 110 GS(3) (Sem: 1-2)

IST 210(3) (Sem: 3-4)

IST 220(3) (Sem: 5-6)

HPA 470(3) (Sem: 7-8)

ADDITIONAL COURSES (6 credits)

Select 6 credits from HPA 433(3), HPA/BBH 440 US;IL(3), HPA 447(3), or HPA 455(3) (Sem: 5-8)

Note: The H P A courses have additional prerequisites that must be met.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

HH

Information Sciences and Technology for Labor Studies and Employment Relations Minor

University Park, College of the Liberal Arts (ISLER)

The joint minor in Information Sciences and Technology for Labor and Employment Relations (ISLER) is designed to provide students with the opportunity to develop working knowledge of information technology, labor and employment relations, and their interdisciplinary synergies. The joint minor is designed to prepare students for professional careers in human resource management, labor relations, information systems, software development, consulting, and government.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits [\[1\]](#)

PRESCRIBED COURSES: (12 credits)

LER 100 GS(3) (Sem: 1-6)

IST 110 GS(3), IST 210(3), IST 220(3) (Sem: 1-7)

ADDITIONAL COURSES: (6 credits)

Select 6 credits from: LER 400 IL(3), LER 401(3), LER 424(3), LER 434(3), LER 435(3), LER 437(3), LER 444(3), LER 460(3), LER 464(3), LER 465(3), LER 497(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-03-090

Review Date: 11/18/2014

IS/LA

Information Systems Management Minor

University Park, Smeal College of Business (ISM)

The Information Systems Management minor focuses on IT supported techniques for exploring, analyzing, integrating, and reporting business data for fact-based decisions. The coursework enables students to study basic concepts, principles, and methods for information analysis, design and management, and to gain an understanding of the best practices for aligning IT-supported analytics with business strategy.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES (15 credits)

MIS 301(3), MIS 431(3), SCM 301(3) (Sem: 4-6)

MIS 441(3), MIS 446(3) (Sem: 5-8)

ADDITIONAL COURSES (4 credits)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 1-4)

Lastest Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-023

Review Date: 04/08/2014

UCA Revision #1: 8/9/06

BA

Information Sciences and Technology for Mathematics Minor

University Park, Eberly College of Science (ISMTH)

The interaction between Information Sciences and Mathematics will continue developing in remarkable new directions. Mathematical scientists enormously benefit from information technology in the performance of research, in communicating and disseminating scientific information and results, as well as in career environments involving data analysis and management. Mathematicians also contribute to making inroads toward the development of new information technologies. Information sciences and technology are already playing a very important role in mathematical education, at all levels, and will experience an overwhelming increase in the near future. Giving undergraduate mathematics students the opportunity to minor in IST will not only enrich their educational achievements but it will also help them succeed in the employment searches.

Students must apply for entrance to the minor no later than the beginning of their senior year.

A grade of C or better is required in all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

IST 110 GS(3) (Sem: 1-2)

IST 210(3) Sem: 3-4

IST 220(3) (Sem: 5-6)

ADDITIONAL COURSES (9 credits)

Select 9 credits from the following 400-level mathematics courses: MATH 451(3), MATH 457(3), MATH 465(3), MATH 467(3), MATH 468(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-03-091

Review Date: 11/18/2014

SC

PIC updated by Publications: 3/26/09

Information Systems and Statistical Analysis Minor

University Park, College of the Liberal Arts (ISSA)

This minor focuses on the use of information systems and statistical methods for solution of human problems. This minor is applicable to any major throughout the University and enhances the student's preparedness for graduate, research, and career opportunities. A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES (10 credits)

CAS 283(3), STAT 200 GQ(4) (Sem: 3-4)

CAS 483(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Students must select 9 credits in consultation with the adviser from courses focusing on information systems or computer science with at least 3 credits at the 400 level. No more than 6 credits may be selected in computer science. (Contact person in charge of the minor for list of appropriate courses.) (Sem: 1-8)

Last Revised by the Department: Fall Semester 1996

Blue Sheet Item #: 24-06-048

Review Date: 10/4/02

LA

Information Sciences and Technology for Industrial Engineering Minor

University Park, College of Engineering (ISTIE)

Collection and processing of information have increased in all sectors for solving engineering problems, including manufacturing and service related problems. Efficient and timely analysis of data is critical for the survival of companies. There is a need for industrial engineers with a strong background in information technology and systems. The minor in Information Sciences and Technology for Industrial Engineering will augment the skills of students in the Department of Industrial and Manufacturing Engineering in the information systems area. All students pursuing a baccalaureate degree in Industrial Engineering are eligible for this minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (12 credits)

IST 110 GS(3) (Sem: 1-4)

IE 330(3), IST 210(3), IST 220(3) (Sem: 5-6)

ADDITIONAL COURSES: (9 credits)

Select 6-9 credits from IE 418(3), IE 462(3) and IE 433(3) (Sem: 7-8)

Select 0-3 credits from MATH 451(3), MATH 455(3), MATH 456(3), IST 441(3) (Sem: 7-8)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

EN/IS

Information Sciences and Technology for Telecommunications Minor

University Park, Donald P. Bellisario College of Communications (ISTLC)

This minor offers students an opportunity to examine the opportunities and challenges presented by convergence of telecommunications and information processing. Internet-mediated services have the potential of fundamentally changing how we communicate and engage in commerce. This convergence offers faster, better, cheaper, smarter, and more convenient services, but also raises a variety of legal, regulatory, political, social, economic, and technology management issues. The IST/Telecommunications minor offers students enrolled in majors outside the College of Information Sciences and Technology an opportunity to examine how telecommunications and information processing technologies and services will impact society as well as their individual circumstances.

The Telecommunications requirements of this minor constitute three courses (nine credit hours). Students can fulfill this requirement by completing COMM 180 offered by the Telecommunications Department in the Bellisario College of Communications and by completing two additional courses from the following list: COMM 479(3), COMM 484(3), COMM 490(3), COMM 491(3) and COMM 492(3). Three IST courses (nine credit hours) constitute the other part of this minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

IST 110 GS(3) (Sem: 1-2)

IST 210(3) (Sem: 3-4)

IST 220(3), COMM 180 GS(3) (Sem: 5-6)

ADDITIONAL COURSES (6 credits)

Select 6 credits from the following: COMM 479(3), COMM 484(3), COMM 490(3), COMM 491(3), COMM 492(3) (Sem: 7-8)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-05-052

Review Date: 02/24/2015

CM, IS

Publications 10/06/05

Information Sciences and Technology Minor

Abington College - contact: Joe Oakes, jxo19@psu.edu

Berks College

Capital College

University College: Penn State Beaver, Penn State Brandywine, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State New Kensington, Penn State Schuylkill, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York, World Campus

University Park, College of Information Sciences and Technology (IST)

This minor is structured to provide students with the theoretical frameworks and skill sets necessary to compete and be productive in the information technology-intensive global context that defines the new "Information Age." Specifically, the minor will be focused on a program that will build an understanding of core information technologies and related areas of study; will prepare students for the practical application of various information sciences and related technologies; and engage students in sharpening their abilities to think critically and to work in teams. All this will be done with the intent to expose students to the cognitive, social, institutional, and global environments of Information Sciences and Technology and to then apply that knowledge as a supplement to their major.

A grade of C or better is required for all courses in this minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

IST 110 GS(3), IST 210(3), IST 220(3) (Sem 1-6)

ADDITIONAL COURSES (9 credits)

Select 3 credits from IST 140(3), IST/COMM 234 GS(3), IST/WMNST 235 US(3), IST 250(3), IST 301(3), or IST 302(3) (Sem 5-8)

Select 6 credits from IST 402(3), IST 431(3), IST 432(3), IST 442 IL(3), IST 445(3), IST 452(3), IST 453(3) (Sem 5-8)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-06-037

Review Date: 4/4/2017

IS

Italian Minor

University Park, College of the Liberal Arts (IT)

The Italian minor offers training in the skills required for fluency in Italian and knowledge in Italian culture, civilization, and literature. Its aim is to open to the student both the traditions of one of the major formative components of the Western world and the continuing vitality of modern Italian and Italian-American life.

As one of the humanistic programs of the College of the Liberal Arts, the Italian minor is not designed to be directly vocational. Nevertheless, rigorous training in this minor can prepare students for rewarding and unique careers in business, travel, ministry, banking, and education. In addition, the federal government employs liberal arts graduates with foreign-language skills in organizations including the National Security Agency, the Central Intelligence Agency, the U.S. Information Agency, and the Department of Labor. The Italian minor can be preparatory for the major and for study abroad, as well as graduate work directed to the Ph.D. degree required for teaching and research in colleges and universities. Students with backgrounds in the humanities are particularly successful applicants to professional schools, such as law and medicine.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 12 credits of Italian courses (Sem: 3-6)

Select 6 credits of 400-level Italian courses (Sem: 5-8)

Note: Elementary Italian Language courses (IT 1, 2, and 10) and lower-division Culture and Civilization (IT 130 and 131) or lower division Literature in Translation (IT 230) courses may not be credited toward the minor.

Last Revised by the Department: Spring Semester 2009

Blue Sheet Item #: 37-03-028

Review Date: 11/18/08

LA

Jewish Studies Minor

University Park, College of the Liberal Arts (J ST)

The Jewish Studies is a flexible interdisciplinary minor for students interested in the study of Jewish history, thought, and culture. Historical coverage ranges from ancient Israel and the contemporary world. Specializations can include, but are not limited to, Modernity and the Jews; Ancient Israel, Bible, and Early Judaism; Holocaust, Anti-Semitism, and Genocide; Jews in America; Jewish Culture and Literature; Israel and Zionism; or Jewish-Christian Relations.

For the Jewish Studies minor, a minimum of 18 credits is required, with at least 6 credits at the 400 level. Up to 9 credits of study abroad may be substituted for supporting course requirements. No more than 4 credits of Modern Hebrew may count toward the requirements for the minor.

All required course work must be completed with a grade of C or higher.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

JST 10 GH;IL(3)/HEBR 10 GH;IL(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits in Jewish Studies, 6 credits of which must be at the 400 level (Sem: 5-8)

(Up to 9 credits of education abroad courses selected in consultation with the adviser may be applied to the requirements for the minor. No more than 4 credits of Modern Hebrew may count toward the requirements for the minor.)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-02-029

Review Date: 10/7/2014

LA

Japanese Language Minor

University Park, College of the Liberal Arts (JAPNS)

The minor in Japanese is intended to provide students with a good working knowledge of the Japanese language, culture, and society in order to broaden their horizons and sharpen their awareness in internationalism and globalization. Students undertake three years of language and culture/film/literature study (or equivalent); education abroad can be included.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (8 credits)

JAPNS 2(4), JAPNS 3(4) (Sem: 1-4)

ADDITIONAL COURSES* (10 credits)

Select 4 credits from JAPNS 110 IL(4), JAPNS 296(1-9), JAPNS 297(1-9), or JAPNS 299 IL(1-12) (Sem: 1-8)

Select 6-8 credits from JAPNS 401 IL(4), JAPNS 402 IL(4), JAPNS 403Y(4), JAPNS 404 IL(4), JAPNS 410 IL(3), JAPNS 431 IL(3), JAPNS 432 IL(3), JAPNS 433 IL(3), JAPNS 434(3), JAPNS 426(3), JAPNS 450 IL(3), JAPNS 452 IL(3), JAPNS 453 IL(3-6), JAPNS 454 IL(3-6), JAPNS 496(1-18), JAPNS 497(1-9), or JAPNS 499 IL(1-15) (Sem: 5-8)

* Special topics courses in English or other courses in English do not satisfy this requirement.

Lasted Revised by the Department: Summer Session 2014

Blue Sheet Item #: 43-01-068

Review Date: 08/19/2014

LA

Kinesiology Minor

Penn State Berks, Benjamin Infantolino, bwi100@psu.edu
University Park, College of Health and Human Development (KINES)

Contact: Mark Dyreson, mxd52@psu.edu

A grade of C or better is required for all courses in the minor.

Students in the Athletic Training Major are not permitted to obtain a Kinesiology Minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-19 credits

ADDITIONAL COURSES (6-7 credits)

Select 6-7 credits from KINES 100(3) or KINES 101(3) or KINES 180(3) and KINES 202(4) (Sem: 5-7)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits from approved list, 6 credits must be at the 400-level: (Sem: 5-8) (see below)

KINES 100(3), KINES 101(3) OR KINES 180(3), KINES 202(4), KINES 321(3), KINES 341(3), KINES 345(3), KINES 350(3), KINES 360(3), KINES 384(3), KINES 410(3), KINES 411(3), KINES 420(3), KINES 421(3), KINES 422(3), KINES 423(3), KINES 424 US(3), KINES 425W(3), KINES 426(3), KINES 427(3), KINES 428(3), KINES 429(3), KINES 439W(3), KINES 440(3), KINES 441 US(3), KINES 442 IL(3), KINES 443 IL(3), KINES 444 US(3), KINES 446 IL(3), KINES 447W(3), KINES 450(3), KINES 452(3), KINES 453(3), KINES 454(3), KINES 455(3), KINES 456(4), KINES 457(3), KINES 460(3), KINES 463(3), KINES 465(3), KINES 467(3), KINES 481W(3), KINES 483(3), KINES 484(3), KINES 485(3), KINES 488(3), KINES 492W(3), KINES 493(3) (Exclude: EMT Courses - Kines 303, 304, 403, 404, 498A, 498B, 498C, 498D, 498E, 498F, Internship Courses – Kines 495A, 495B, 495C, and 495D and Kines 203, 296 and 496)

Last Revised by the Department: Fall 2017

Blue Sheet Item #: 46-03-034

RT: 41-02 231

Review Date: 11/14/2017

HH

Korean Language Minor

University Park, College of the Liberal Arts (KORLG)

The Korean Language Minor is intended to provide students with a good working knowledge of the Korean language, culture, and society in order to broaden their horizons and sharpen their awareness of Korea in this era of internationalism and globalization. Students undertake two to three years of language study (or equivalent); education abroad can be included.

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (8 credits)

KOR 2(4), KOR 3(4) (Sem: 1-4)

ADDITIONAL COURSES (10 credits)

Select 4 credits from KOR 110(4), KOR 296(1-18), KOR 299 IL(1-12) (Sem: 1-8)

Select 6 credits from KOR 401 IL(4), KOR 402 IL(4), KOR 424 IL(3); KOR 425 IL(3); KOR 496(1-18), KOR 498(1-9), ASIA 499 IL(1-12); KOR 499 IL(1-12) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-108

Review Date: 8/22/2017

Leadership Development Minor

University Park, College of Agricultural Sciences (L DEV)

This minor is designed for students in any major of the University wanting to supplement their program with studies in leadership development. The minor consists of 18 credits, at least 3 of which are an internship experience. Up to 9 additional credits may be required depending on the student's selection of courses under "Additional Courses". This minor provides students with a fundamental concept of leadership development and expands in three related dimensions. A grade of C or better is required in all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

AEE 360(3) (Sem: 5-6)

AEE 460(3), AEE 495(3) (Sem: 7-8)

AEE 465(3)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in consultation with an adviser from courses on the Department approved list that focus in one of three support areas: leadership styles, ethical and moral dimensions of leadership, or global leadership (Sem: 1-8)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-004

Review Date: 8/23/16

AG

Landscape Architecture Minor

University Park, College of Arts and Architecture (LARCH_UMNR)

Landscape architecture is the art of design, planning, or management of the land and of the natural and built elements upon it. As an academic discipline, it embodies creative, cultural, philosophical, and scientific knowledge bases. As a professional discipline, the practice of landscape architecture includes site design, urban design, master planning, community planning, regional planning, resource conservation, and stewardship.

The Minor in Landscape Architecture allows greater accessibility to the knowledge domains within the professional accredited Landscape Architecture major. The minor, as a non-professional opportunity, provides students with a broad understanding of the history, practice, and theories of how landscape architecture shapes the world, as well as the opportunity for more specialized study in selected topics.

The minor is flexible so that students can tailor their course choices to accommodate individual interests. Students should seek the advice of the minor advisor for course selection.

This minor is appropriate for students wishing to gain a greater understanding of the landscape architecture discipline as it complements many other professions dealing with natural systems management, site and urban design, master planning (community and regional), graphic information systems, resource conservation and stewardship, and landscape history/preservation.

A grade of C or better is required for all courses in the minor.

For a Minor in Landscape Architecture a minimum of 18 credits is required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (7 credits)

LARCH 60 GA;US;IL(3), LARCH 125(1), AA 121 GA(3)

ADDITIONAL COURSES (11 credits)

(6 credits must be at the 400-level) LARCH 65 GA;US;IL(3); LARCH 115(3); LARCH 116(3); LARCH 145(3); LARCH 155(2); LARCH 156(2); LARCH 235(3); LARCH 245(3); LARCH 246(1); LARCH 256(2); LARCH 276(3); LARCH 365(3); LARCH 375(3); LARCH 424(3); LARCH 450(3); LARCH 495(1-3); LARCH 496(1-3); LARCH 497(1-3); LARCH 499 IL(1-12); ARCH 497(1-3) (Sem: 1-12)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-014

Review Date: 1/10/2017

Latin American Studies Minor

University Park, College of the Liberal Arts (LATAM)

This interdisciplinary minor is designed for students in any college or program of the University who want to supplement their knowledge and skills with the study of Latin America. A certificate is awarded to students who complete the requirements of the minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-19 credits

PRESCRIBED COURSES (3 credits)

PLSC 456(3) (Sem: 1-4)

ADDITIONAL COURSES (6-7 credits)

HIST 178 GH;IL(3) or HIST 179 GH;IL(3) (Sem: 1-4)

PORT 1(4) or SPAN 100(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits (at least 3 credits at the 400 level) from an approved list in consultation with the adviser. (Sem: 1-4)

Last Revised by the Department: Summer Session 2009

Blue Sheet Item #: 37-06-057

Review Date: 4/14/09

LA

Latin Minor

University Park, College of the Liberal Arts (LATIN)

The Latin minor emphasizes the development of skills in the linguistic and literary aspects of the Latin language. Through 18 credits of course work, including 6 at the 400-level, students develop mastery of the grammatical structures essential to the ability to read Latin; a vocabulary adequate to the sight recognition of a large number of Latin vocabulary items; and a thorough understanding of the formal system of word inflection and derivation which forms the grammatical core of the language. Once students have completed the basic 12 credits in LATIN 001, LATIN 002 and LATIN 003, they have the opportunity to pursue their studies in a wide variety of 400-level courses, which include prose authors such as historians, poets who wrote in epic and elegiac styles, playwrights, and other literary stylists who round out the vast body of Latin literature. In addition, 400-level courses are available on such topics as Latin prose composition, in which students learn to write Latin, and Latin linguistic history. The minor is appropriate for a wide number of majors, including history, medieval studies, archaeology, medicine, philosophy, and law.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS (18 credits)

Select 12 credits of LATIN courses (Sem: 1-8)

Select 6 credits of 400-level LATIN courses (Sem: 5-8)

Last Revised by the Department: Summer Session 2001

Blue Sheet Item #: 29-05-036

Review Date: 11/01

LA

Legal Environment of Business Minor

University Park, Jeff Sharp, jms16@psu.edu, Smeal College of Business (LEBUS)

This minor presents students with a structured study of the statutory and common law governing the business environment. Students in this program have the opportunity to learn advanced legal subject matter, including business organization structures, employment law, property law, commercial transactions, intellectual property, environmental law, and government regulation. Content is framed around the organization and support of complex business enterprises from a legal perspective. This includes complex legal transactions, litigation support and avoidance, and the development of enterprises. The emphasis on the complex nature of legal organization formation, transactions, and litigation support is provided through a rigorous selection of business law and core business courses.

A grade of C or better is required in all courses used to meet the requirements of the LEBUS minor. For admission to the minor, students must have completed ACCTG 211(4) and ECON 102(3) with grades of C or better.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits
(At least 6 credits must be at the 400 level)

PRESCRIBED COURSES (12 credits)

ECON 104 GS(3) (Sem: 1-4)

FIN 301(3), BLAW 341(3), BLAW 441(3) (Sem: 6-8)

ADDITIONAL COURSES (6 credits)

Select 6 credits from the following:

BLAW/RM 424(3), BLAW/RM 425(3), BLAW 444(3), BLAW 445(3), BLAW 446(3) (Sem: 6-8)

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-06-052A

Review Date: 04/10/2012

BA

Labor Studies and Employment Relations Minor

*University Park, College of the Liberal Arts (LER)
World Campus*

This interdisciplinary minor is designed for students in any major of the University who wish to supplement their knowledge in the areas of labor studies and industrial relations. The minor consists of 18 credits, at least 6 of which must be at the 400 level. A certificate is awarded to students who complete the requirements of the minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits
(at least 6 credits at the 400 level)

PRESCRIBED COURSES (3 credits)
LER 100 GS(3) (Sem: 1-6)

ADDITIONAL COURSES (3 credits)
LER 201 GS(3) or LER 401(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 3-6 credits in Labor and Industrial Relations (Sem: 5-8)
Students may select, in consultation with their Labor Studies and Employment Relations adviser, 6-9 credits from courses in business administration, economics, management, political science, psychology, and sociology (Sem: 1-8)

Last Revised by the Department: Fall Semester 2007

Blue Sheet Item #: 35-06-465

Review Date: 4/10/07

LA

Linguistics Minor

University Park, College of the Liberal Arts (LING)

This minor is designed for students in any major of the University who wish to supplement their knowledge in the area of linguistics. The minor consists of 18 credits. A certificate is awarded to students who complete the requirements of the minor.

For more information on the Linguistics Program, visit our Web site: <http://linguistics.la.psu.edu>.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

LING 402(3), LING 404(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)

LING 1 GS(3) or LING 100 GS(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 9 credits from LING offerings (Sem: 5-8)

Last Revised by the Department: Summer Session 2001

Blue Sheet Item #: 29-03-060

Review Date: 11/21/00

LA

Latina and Latino Studies Minor

University Park, College of the Liberal Arts (LTNST)

This minor in Latina and Latino Studies offers students across the University an opportunity to learn about the diverse histories, cultures, politics, migration patterns, and other aspects of Latina/o populations in the United States. Classes will be offered on Latino history; the artistic achievements of Latinas/os in popular culture, literature, theatre, film, and television; the migratory flows of Latina/o populations; education; other issues related to language and identity; and family issues. These courses demonstrate that studying Latina/o social formations is a critical component of understanding the social fabric of the U.S. as well as the U.S. presence in Latin America and the complex phenomenon of globalization. Although the emphasis of Latina/o Studies is on the U.S., the role of Latina/o immigration within wider shifts related to globalization requires an understanding of Mexico, Central and South America, and the Spanish-speaking Caribbean.

The minor consists of 18 credits, at least 6 of which must be at the 400 level.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

LTNST 100 GH;US(3) (Sem: 1-6)

ADDITIONAL COURSES (9 credits)

Select 9 credits from LTNST 226(3) or ENGL 226 GH;US;IL(3), LTNST 300 US(3) or WMNST 300 US(3), LTNST 315 GH;US(3) or SPAN 315 GH;US(3), SPAN 326 GH;US(3), LTNST 403(3) or CMLIT 403(3), LTNST 426(3) or ENGL 426 US(3), and 3 credits of SPAN 3(4) or above. (Sem: 1-8)

SUPPORTING COURSES AND RELATED AREAS: (6 credits)

Select 6 credits from approved list in consultation with an academic adviser.

Last Revised by the Department: Fall Semester 2006

Blue Sheet Item #: 34-06-321

Review Date: 4/11/06

EN

Mushroom Science and Technology Minor

University Park, College Of AGRICULTURAL SCIENCES (M S T)

JOHN PECCHIA, RES ASSOC/ASST PROF PPEM

This interdisciplinary minor is designed to prepare students for a career in the mushroom industry. The minor offers practical work experience at the University's Mushroom Research Center. Students are required to complete a minimum of 22 credits. The core of prescribed courses provides a foundation in the basic fundamentals of mushroom science and technology. A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

For the MINOR in Mushroom Science and Technology Minor a minimum of 22 credits are required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 22 credits

PRESCRIBED COURSES (13 credits)

BIOL 110 GN(4), PPEM 405(3), PPEM 425(4), PPEM 496(1-18) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)

Select 9 credits from: AGBM 200(3); ENT 202 GN(3); ENT 313(2); FDSC 408(2); FDSC 409(3); MGMT 150(3); MICRB 201(3); MICRB 202(2) (Sem: 3-8)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

Management Minor

Penn State Abington - contact: Dr. Feng Zhang, fzz34@psu.edu
Penn State Erie, The Behrend College (MANGT)

Contact(s): Balaji Rajagopalan, bur14@psu.edu

The management minor requires students to complete 6 additional credits in management beyond the 12 credits required in MGMT 301, MGMT 331, MGMT 341 and SCM 301. It is designed to introduce students to advanced topics in management, such as Human Resources management, as well to basics of organizations and interpersonal skills. This minor can provide an enhanced understanding of management challenges found in all organizations, regardless of the function or activities being undertaken. As a result, the management minor is uniquely qualified to work well as a supporting area with most other business majors.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

MGMT 301(3), SCM 301(3) (Sem: 4-5)
MGMT 331(3), MGMT 341(3) (Sem: 6-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of 400-level MGMT courses from the following list:

MGMT 409(3), MGMT 410(3), MGMT 420(3), MGMT 432(3), MGMT 440(3), or MGMT 461 IL(3) (Sem: 6-8)

Last Revised by the Department: Spring Semester 2012

Blue Sheet Item #: 40-06-045

Review Date: 04/10/2012

UCA Revision #1: 8/9/06
UCA Revision #2: 7/27/07

BD

Mathematics Applications Minor

Altoona College (MAPAL)

The minor in mathematics and its applications is designed to provide students with an interest in applied mathematics, and an opportunity to use mathematical tools and ways of thinking in their own major or area of concentration. The minor requires students to complete 26-28 credits in Mathematics with 6 credits from the 400-level MATH courses and 6 credits from the 400-level Mathematics Applications courses. The latter are selected in consultation with the coordinator of the minor and are from areas that directly incorporate or support the use of mathematics. Typical selections include computer science, engineering, physics, and statistics.

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 26-28 credits

PRESCRIBED COURSES (8 credits)

MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-4)

ADDITIONAL COURSES (6-8 credits)

Select 6-8 credits from MATH 220 GQ(2-3), MATH 230(4), MATH 231(2), MATH 232(2), MATH 250(3), MATH 251(4), MATH 310(3), MATH 311W(3-4), or MATH 312(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 6 credits of 400-level MATH courses (Sem: 5-8)

Select 6 credits from 400-level Mathematics Applications* courses (Sem: 5-8)

*Mathematics Applications Courses: Through consultation with the coordinator of the minor, courses from areas that directly incorporate or support the use of mathematics will be selected. Typical areas include computer science, engineering, physics, and statistics. See divisional list of acceptable courses.

Last Revised by the Department: Spring Semester 2005

Blue Sheet Item #: 33-02-000

Review Date: 11/23/04

UCA Revision #1: 8/9/06

AA

Marine Sciences Minor

Contact: Dr. Iliana Baums, ibb3@psu.edu

This program provides an excellent opportunity for undergraduates to pursue their interests in the study of the oceans and make more informed decisions about future graduate studies in marine sciences. Although Penn State does not award degrees in this field, a number of faculty pursue research interests in the marine sciences, and a varied selection of undergraduate courses in the marine sciences is available. The student can either complete the requirements for the minor at University Park (UP) or participate in an intensive semester-long oceanography experience at the Southampton, UK, Oceanography Centre (SOC) through education abroad:

The latter option may be of particular interest to students from non-UP locations. SOC has designed a program for PSU students that provides abundant opportunity to participate in shipboard oceanographic research, including a week of day-cruises in the spring and a 2-week series of cruises in June. Students who elect to pursue that minor at UP have the opportunity to receive training as scientific scuba divers through Penn State's Science Diving Program and participate in a number of other field experiences in the marine sciences.

MARINE SCIENCES MINOR: The Marine Sciences Committee is authorized to award a minor certificate to any undergraduate student regularly enrolled in a degree program at the University who, in addition to satisfying the degree requirements of his or her baccalaureate major, satisfies the requirements for the Marine Sciences minor. The completion of the minor is reflected by a formal notation on the student's official record at the time of graduation.

To enter the program, a student must have attained at least fourth-semester standing, completed CHEM 112, MATH 111 or MATH 141, and BIOL 110 or their equivalents, and have earned a cumulative grade-point average of at least 2.50. To ensure adequate advising and record keeping, the student must apply for the minor in the Marine Sciences program office and must then complete the requirements shown below.

Courses offered by other institutions may be substituted for any of the required courses listed below, if accepted for transfer by the student's major department and approved by the Marine Sciences Committee. This includes up to 16 transfer credits from SOC. Upon completion of the requirements and no later than the tenth week of the semester in which the student is to graduate, he or she must verify in the Marine Sciences program office that the requirements have been met.

In addition to the entrance requirements shown above, there are prerequisite credits required for courses listed under Supporting Courses and Related Areas.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES (3 credits)

GEOSC 40 GN(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (16 credits)

At least 6 credits of field studies from the following list: EARTH 240(3), EMSC 440(3), EMSC 441(4), BIOL 499A IL(3), BIOL 450(3-5), BIOL 482(4), GEOSC 410(3), or BIOL 496(1-6), ERM 496(1-6), GEOSC 496(1-6), METEO 496(1-6) with consent of instructor and Marine Science Minor (Sem: 5-8)

Students may also wish to transfer 6 credits of field-oriented course work from another institution with prior approval of the chair of the Marine Sciences minor.

Select 10 credits from the following list: BIOL 406(3), BIOL 417(4), GEOSC 410(3), GEOSC 419(3), GEOSC 440(3), METEO 451(3), WFS 435/ERM 435(3), WFS 436/ERM 436(3), WFS 450/ERM 450(3), WFS 452(2), WFS 453(2) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-05-050C

Review Date: 2/21/17

UCA Revision #1: 8/9/06

UCA Revision #1: 7/27/07

Mathematics Minor (MATH)

Contact: Altoona College, Dan DiLeo, dxdd22@psu.edu; Eberly College of Science, James Sellers, jxs23@psu.edu

The minor is designed to provide students with an interest in mathematics an opportunity to study a broad range of mathematical topics. The requirements allow students a great deal of flexibility in choosing courses of interest.

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 26-28 credits

PRESCRIBED COURSES (8 credits)

MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-4)

ADDITIONAL COURSES (6-8 credits)

Select 6-8 credits from MATH 220 GQ(2-3), MATH 230(4), MATH 231(2), MATH 232(2), MATH 250(3), MATH 251(4), MATH 310(3), MATH 311W(3-4), or MATH 312(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits of 400-level MATH courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

Review Date: 5/10/04

UCA Revision #1: 8/9/06

Mechatronics Technology Minor

Capital College, School of Science, Engineering and Technology (MCHTC)
Contact: Dr. Amit Banerjee

Mechatronics is an interdisciplinary technical discipline that combines mechanical, electrical, electronics, control and computer engineering technology. The field deals with the design, development, control, and application of advanced electro-mechanical systems. Such systems will include sensors, actuators, microprocessors, controllers, software, computer, and mechanical hardware components. The purpose of the mechatronics technology minor is to provide undergraduate students an opportunity to take relevant courses that will sequentially build on their knowledge and understanding of mechatronic systems and to provide recognition to those who do so.

A grade of C or better is required for all courses in the minor.

REQUIREMENTS FOR THE MINOR: 18-23 credits

ADDITIONAL COURSES (6-7 credits)

EMCH 211(3) or ET 300(3) or MCHT 111(3) (Sem: 3-4)

EET 311(4) or EET 315(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (12-16 credits)

Select 6-8 credits from the following:

(Students graduating with an MET major should take 8 credits from Group A; students graduating with an EET major should take 6-7 credits from Group B; all other students should take one course from each group, totaling 7-8 credits.)

Group A:

EE 310(4) or EET 212(4) (Sem: 5-6)

CMPEN 271(3) and CMPEN 275(1) or CMPET 117(3) and CMPET 120(1) (Sem: 5-6)

Group B:

EET 341(3) or EMET 330(3) or ME 345(4) or ME 345W(4) or MET 341(3)(Sem: 5-6)

EMCH 212(3) or ET 321(3) or MET 206(3) (Sem: 5-6)

Select 6-8 credits from the following (one course from category I and II):

Category I:

CMPEH 472(4) or EE 485(3) (Sem: 6-8)

Category II:

EET 433(4) or EET 440(3) or EMET 410(3) or MET 454(3) or MET 455(3) (Sem: 7-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-05-028

Review Date: 02/24/2015

Mechatronics Minor

Capital College, School of Science, Engineering and Technology (MCHTR)
Contact: Dr. Amit Banerjee

Mechatronics is an interdisciplinary engineering field that combines mechanical, electrical, electronics, control and computer engineering. The field deals with the design, development, control, and application of advanced electro-mechanical systems. Such systems will include sensors, actuators, microprocessors, controllers, software, computer, and mechanical hardware components. The purpose of the minor is to provide undergraduate students an opportunity to take relevant courses that will sequentially build on their knowledge and understanding of mechatronic systems and to provide recognition to those who do so.

A grade of C or better is required for all courses in the minor.

REQUIREMENTS FOR THE MINOR: 19-22 credits

PRESCRIBED COURSES (4 credits)

EE 210(4) (Sem: 4-5)

ADDITIONAL COURSES (15-18 credits)

Select 3 credits from: CMPSC 121(3), CMPSC 200(3), or CMPSC 201(3) (Sem 2-4)

Select 6-8 credits from the following:

(Students graduating with a M E major should take 7-8 credits from Group A; students graduating with an EE major should take 7 credits from group B; all other students should take 6-8 credits from both A and B.)

Group A:

CMPEN 270 (4) or CMPEN 271(3) and CMPEN 275(1) (Sem 3-4)

CMPEN 331(3) or EE 310(4) or EE 387(3) (Sem 5-6)

Group B:

ME 345(4) or ME 345W(4) (Sem 5-6)

ME 357(3) (Sem 5-6)

Select 6-7 credits from the following (one course each from Category I and II):

Category I:

CMPEH 472(4), CMPEN 472(3), EE 485(3), EE 487(3), ME 445(4) (Sem 5-8)

Category II:

EE 483(3), ME 455(3), ME 456(3) (Sem 5-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-05-027

Review Date: 02/24/2015

Media Studies Minor

University Park, Donald P. Bellisario College of Communications (MEDIA)

The Media Studies minor is designed for students who want to develop their knowledge of the mass media from a variety of approaches, including aesthetic, humanistic, social-behavioral, and legal-policy. This minor is a theory-based rather than a professional program. In fact, students in the minor may not take professional skills communications courses as part of this program. The minor consists of 18 credits, at least 6 of which must be at the 400 level.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

COMM 100 GS(3) (Sem: 1-2)

ADDITIONAL COURSES (15 credits)

Select 3 credits from COMM 110 GH(3), COMM 150 GA(3), COMM 118 GS(3) or COMM 180 GS(3) (Sem: 3-6)

Select 12 credits from COMM 205 US(3), COMM 250 GA(3), COMM 261 GH(3), COMM 304(3), COMM 404(3), COMM 401(3), COMM 403(3), COMM 405(3), COMM 408(3), COMM 409(3), COMM 410 IL(3), COMM 411(3), COMM 413W(3), COMM 418(3), COMM 419 US:IL(3), COMM 450(3), COMM 451(3), COMM 452(3), COMM 453 IL(3), COMM 454(3), COMM 455(3), COMM 484(3), COMM 485(3), COMM 496(3), or COMM 499(3) (Sem: 5-8)

Last Revised by the Department: Summer Session 2008

Blue Sheet Item #: 36-05-022

Review Date: 2/26/08

Department head updated by Publications: 1/16/07

CM

Publications: 02/17/05

Medieval Studies Minor

University Park, College of the Liberal Arts (MEDVL)

The Medieval Studies minor encourages an interdisciplinary approach to the diverse and interconnected cultures of Europe and the Mediterranean rim between the fifth and the fifteenth centuries and to contact zones in the Americas, Near East, and the northwestern Pacific. Students survey and evaluate key dimensions of the medieval period across disciplinary boundaries. They develop skills in critical writing and in analyzing documents, monuments, contexts, and conventions of expression; consider emerging fields such as digital humanities and new media; and examine the abiding cross-cultural and trans-historical significance of historical, social, religious, creative, and linguistic developments from the medieval period. The minor allows students to combine courses, guided readings, and research projects in fields such as history, art, archaeology, literature, languages, philosophy, and religious studies.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18credits

REQUIRED COURSES (6 credits)

MEDVL/HIST 107 GH;IL(3), MEDVL 108 GH;IL(3) (Sem: 3-4)

ADDITIONAL COURSES (12 credits)

6 credits must be at the 400-level.

Art History

ARTH 111 GA;IL(3), ARTH 140 GA;IL(3), ARTH 201 GA;IL(3) (Sem: 1-8)

ARTH 302 GA;IL(3), ARTH 312 GA(3), ARTH 330 GA;IL(3) (Sem: 3-8)

ARTH 402 IL(3), ARTH 412 IL(3), ARTH 413(3), ARTH 422 IL(3-9), ARTH 442 IL(3), ARTH 452 IL(3), ARTH 460 IL(3) (Sem: 5-8)

History

HIST 105 GH;IL(3), HIST 108 GH;IL(3), HIST 141 GH;IL(3), HIST 165 IL(3) (Sem: 1-8)

HIST 406(3), HIST 407 IL(3), HIST 408 IL(3), HIST 411(3), HIST 412 IL(3), HIST 413 IL(3), HIST 471 IL(3), HIST 480 IL(3) (Sem: 5-8)

Literature and Language

CMLIT 1 GH;IL(3), CMLIT 106 GH;IL(3), ENGL 221W(3), GER 175 GH;IL(3), HEBR 10 GH;IL(3), SPAN 130 GH;IL(3) (Sem: 1-8)

FR 351 IL(3), IT 330W(3), SPAN 353(3) (Sem: 3-8)

CMLIT 401 IL(3), CMLIT 408 IL(3), ENGL 441(3), ENGL 442(3), GER 430 IL(3), GER 431 IL(3), IT 415(3), IT 490(3), SPAN 418(3) (Sem: 5-8)

Medieval Studies

MEDVL 197(1-9), MEDVL 199 IL(1-12), MEDVL 294(1-12), MEDVL 299 IL(1-12) (Sem: 1-8)

MEDVL 395(1-18), MEDVL 399 IL(1-12) (Sem: 3-8)

MEDVL 411 IL(3), MEDVL 413 IL(3), MEDVL 494(1-12), MEDVL 496(1-18), MEDVL 497(1-9), MEDVL 499 IL(1-12) (Sem: 5-8)

Philosophy and Religious Studies

RLST 120 GH(3), PHIL 201 GH(3) (Sem: 1-8)

RLST 420(3) (upon advising) (Sem: 5-8)

Lasted Revised by the Department: Spring Semester 2014

Blue Sheet Item #: 42-06-078

Review Date: 04/08/2014

Middle East Studies Minor

Janina Safran, Associate Professor of History
208 Weaver Building
University Park
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University Park, College of the Liberal Arts (MESTU)

This interdisciplinary program is designed for students having special interest in the Middle East broadly defined. In addition to the requirements for the minor, students may select other courses dealing with the Middle East, including courses studied abroad, subject to the approval of the Middle East Studies director. A certificate is awarded to students who complete the requirements of the minor.

Some courses may require other course work as some courses have prerequisites.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits
(Some courses in this minor have prerequisites that are not required by the minor.)

ADDITIONAL COURSES (3 credits)
Select 3 credits from HIST/ARAB/RLST 165(3) HIST/JST 181 GH;IL(3), HIST/RLST 471 IL(3), HIST 472 IL(3), HIST/JST 473 IL(3), RLST 107 GH;US;IL(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (15 credits)
Select 15 credits, at least 6 at the 400-level, from approved program list in consultation with the professor in charge of the minor. No more than 6 credits may come from language study. (Sem: 5-8)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-108

Review Date: 8/23/16

LA

Meteorology Minor

University Park, College of Earth and Mineral Sciences (METEO)

Students pursuing the 39-credit Meteorology minor seek to broaden their education by specializing in an applied science. As for Meteorology majors, students minoring in Meteorology must have a strong background in Mathematics and Physics. Eleven of the 20 Meteorology credits come from the three required courses of METEO 300, METEO 421, and METEO 431. The remaining nine credits come from 100-, 200-, 300-, or 400-level METEO courses, at least one of which must be at the 400 level. Completion of the three required courses ensures that students will have the foundational atmospheric science material that they need to register for the remaining nine Meteorology credits. In consultation with a Meteorology adviser, students may choose these elective courses from a variety of sub-specialties, including Air Quality Studies, Atmospheric Dynamics, Atmospheric Physics, Climatology, Computer Applications, and Weather Analysis and Forecasting.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 39 credits

PRESCRIBED COURSES (30 credits)

METEO 300(4), METEO 421(4), METEO 431(3) (Sem. 5-6)

CHEM 110 GN(3), MATH 231(2), MATH 232(2), MATH 251(4), PHYS 211 GN(4), PHYS 212 GN(4) (Sem: 5-6)

ADDITIONAL COURSES (9 credits)

Select 9 credits of 100-, 200-, 300-, or 400-level Meteorology; at least 3 credits must be at the 400 level. (Sem. 5-8)

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-01-060

Review Date: 8/25/15

EM

Microbiology Minor

University Park, Eberly College of Science (MICRB)

The minor in Microbiology is a collection of required and elective courses that (1) provides a limited but sound foundation in the discipline, (2) requires students to develop reasonable expertise in handling and characterizing microorganisms, and (3) permits students to emphasize some subdiscipline of microbiology in which they may have a particular interest. The minor specifies the introductory lecture and laboratory courses in microbiology and one course each in immunology and cell biology. A minimum of two laboratory courses exposes students to basic and experimental/applied techniques. Sufficient room exists within the minor for selection of two or three elective courses at the advanced level that may emphasize a specialty area of the discipline such as virology or microbial genetics. Students who complete the minor have a sufficient background to pursue positions in industry that require an appreciable expertise in microbiology.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 24 credits

PRESCRIBED COURSES (17 credits)

CHEM 110 GN(3), CHEM 112 GN(3), MICRB 201(3), MICRB 202(2), MICRB 251(3) (Sem: 3-4)
MICRB 410(3) (Sem: 5-6)

ADDITIONAL COURSES (2-3 credits)

Select 2-3 credits from MICRB 421W(3) or MICRB 422(2) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (4-5 credits)

Select 4-5 credits of 400-level MICRB courses (Sem: 5-8)

Note: BMB 442(3), MICRB 408(1-2), MICRB 496(1-18) and MICRB 497(1-9) may not be used to fulfill the requirements for the minor.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

SC

Management Information Systems Minor

Penn State Erie, The Behrend College (MISBD)

Contact(s): Ash Deshmukh, avd1@psu.edu

The Management Information Systems minor can open new career options for the student, increase the student's market value, and improve the student's chances for advancement.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (9 credits)

MIS 204(3) (Sem: 3-4)

MIS 336(3), MIS 430(3) (Sem: 5-7)

SUPPORTING COURSES AND RELATED: (9 credits)

Select 6 credits from CMPSC or MIS courses (Sem: 5-6)

Select 3 credits from 400-level CMPSC or MIS (Sem: 7-8)

Last Revised by the Department: Summer Session 2008

Blue Sheet Item #: 36-04-010

Review Date: 1/15/08

UCA Revision #1: 8/9/06

BD

Military Studies Minor (MLTRY)

CHAIR, MILITARY STUDIES INTERDISCIPLINARY COMMITTEE, *in charge*

This interdisciplinary minor is designed for all students with special interests in military and national security affairs. Military emphasis is provided in one of three areas--Aerospace Studies, Military Science, or Naval Science. American military forces have played an important role in our domestic and international history and will continue to have significant involvement in policy arenas relating to national security and international relations. Students elect one military service branch for their prescribed courses and select two additional courses from appropriate history and political science courses emphasizing national security policy. At least 6 credits must be taken at the 400 level.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 24-27 credits

PRESCRIBED COURSES (Choose one service branch--18-20 credits)

AIR FORCE (20 credits)

AIR 151(2), AIR 152(2), AIR 251(2), AIR 252(2), AIR 351(3), AIR 352(3), AIR 451(3), AIR 452(3) (Sem: 1-4)

ARMY (20 credits)

ARMY 101(2), ARMY 102(2), ARMY 203(2), ARMY 204(2), ARMY 301(3), ARMY 302(3), ARMY 401(3), ARMY 402(3) (Sem: 1-7)

MARINES (18 credits)

NAVSC 101(3), NAVSC 103(3), NAVSC 311(3), NAVSC 313(3), NAVSC 402(3), NAVSC 411(3) (Sem: 1-7)

NAVY (21 credits)

NAVSC 101(3), NAVSC 103(3), NAVSC 302(3), NAVSC 202(3), NAVSC 323(3), NAVSC 401(3), NAVSC 402(3) (Sem: 1-7)

ADDITIONAL COURSES (6 credits)

Select 6 credits from the following courses:

HIST 108 GH;IL(3), HIST 120 GS;IL(3), HIST 130 GH;US(3), HIST 142 GS;IL(3), HIST 143 GH;IL(3), HIST 144 US;IL(3), HIST 151 GS;US(3), HIST 160 US(3), HIST 161 US(3), HIST 165 IL(3), HIST 173 GH;IL(3), HIST 175 GH;IL(3), HIST 178 GH;IL(3), HIST 181 GH;IL(3), HIST 192 GH;IL(3), HIST 420 IL(3), HIST 430 IL(3), HIST 434 IL(3), HIST 441 US(3), HIST 444 US(3), HIST 452 US;IL(3), HIST 454 US(3), HIST 473 IL(3) (Sem: 1-2, 7-8)
PLSC 3 GS;IL(3), PLSC 14 GS;IL(3), PLSC 20 GS;IL(3), PLSC 22 GH;IL(3), PLSC 137(3), PLSC 413(3), PLSC 415(3), PLSC 437(3), PLSC 438(3), PLSC 439(3), PLSC 442(3), PLSC 452(3), PLSC 453 IL(3), PLSC 454 IL(3), PLSC 455(3), PLSC 456(3), PLSC 458(3-6), PLSC 467(3) (Sem: 1-2, 7-8)

Lasted Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-03-100

Review Date: 11/18/2014

UCA Revision #2: 7/30/07

Mining Engineering Minor

University Park, College of Earth and Mineral Sciences (MNG E)

Professor Jeffery Kohler, Program Officer

The minor in Mining Engineering offers a specialized program for students in many other broad-based, technical majors, such as those in engineering or science. The demand for professionals with the training and skills for a career in the minerals- and energy-recovery profession far exceeds the supply. Mineral exploration and evaluation, mine development, marketing, health and safety, environmental protection, and mine management are all areas of industry employment. It is recommended that students wishing to pursue this minor come from an engineering or science major. As a result, the selection of this minor can provide additional career options for students in a wide range of offerings at Penn State.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (18 credits)

MNG 230(3), MNG 331(3), MNG 404(2), MNG 410(2), MNG 412(3), MNG 422(3), and MNG 441(3) (Sem: 3-8)

Review Date: Fall Semester 1997

EM

Marketing Minor

Penn State Erie, The Behrend College (MRKTG)

Contact(s): Mary Beth Pinto, mxp49@psu.edu

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

For a Minor in Marketing a minimum of 18 credits are required.

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)
MKTG 301(3), MKTG 342(3) (Sem: 5-6)

ADDITIONAL COURSES (3 credits)
MKTG 330(3); MKTG 344(3)

SUPPORTING COURSES AND RELATED AREAS (9 credits)
Select 9 credits of MKTG courses (at least 6 credits at the 400 level) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-06-006

Review Date: 4/4/17

UCA Revision #2: 7/30/07

BD

Mathematics Minor

Penn State Erie, The Behrend College (MTHBD)

Contact(s): Michael Rutter, mar36@psu.edu

The minor in mathematics (MTHBD) shows students how to use mathematical tools and ways of thinking in many fields. The choice of several upper-level courses allows students to focus on specific areas of interest. Business majors might choose linear programming and operations research. Engineering students could enroll in numerical methods. Chemistry students might choose numerical methods and linear programming, while biology majors could enroll in mathematical modeling and differential equations. A solid mathematical background can be a strong asset in fields of education, neurobiology and behavior, plant biology and agriculture, immune system studies and pathology, medical sciences, marketing and management science, engineering, national security, ecology, and ecosystems.

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (4 credits)

MATH 311W(4) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (14 credits)

Select 8 credits of MATH courses at the level of MATH 140 GQ(4) or above (Sem: 1-6)

Select 6 credits of 400-level MATH courses (Sem: 7-8)

(No more than three credits from MATH 495 courses can be used to satisfy this requirement.)

Last Revised by the Department: Fall Semester 2008

Blue Sheet Item #: 36-07-003

Review Date: 6/17/08

UCA Revision #1: 8/9/06

BD

Materials Science and Engineering Minor

Contact: Penn State Harrisburg, Issam Abu-Mahfouz, iaa2@psu.edu

The Minor in Materials Science and Engineering prepares students to understand the materials properties, materials processing techniques, characterization methods, and selection criteria in implementing engineering solutions. The materials selection for cutting edge mechanical design requires precise and definite knowledge of choice of materials, processing route, and mechanical response in service conditions. The materials engineer must have a sound expertise on modeling and experimental tools validating microstructural, mechanical, and electrical properties requirements for a specific design application. Hence, a wide variety of industries such as aerospace, automotive, energy, biomedical, and electronics to name a few, have a demand for engineers with a strong background in materials engineering. The MMSE covers introductory courses and laboratories on materials science in general, properties and processing of materials, materials thermodynamics and kinetics, and characterization of mechanical, microstructural and electrical properties of materials. The introductory courses and labs provide the basic foundation on materials science and engineering; the rest of the courses provide advanced knowledge on properties and selection, processing techniques, and characterization methods. Moreover, thermodynamics and kinetics of materials systems and process are also introduced. The above mentioned topics are covered by offering courses from sophomore through senior level.

The Minor in Materials Science and Engineering requires the completion of a total of 18 credits in materials related and other supporting courses. With the approval of the student's program chair, some of these courses may also be used to satisfy the requirements for the student's major bachelor's degree. At least 9 unique credits counted toward the requirements for a student's minor must not be used to fulfill the requirements for that student's major.

- A grade of "C" or better in all the courses taken toward the minor is required.
- Elective courses may be drawn from a wide variety of courses in Materials Science, Engineering, and Physics.
- The Minor is open to any undergraduate who has: A minimum cumulative GPA of 3.0 or better and a minimum grade of "C" or better in the pre-requisite courses for the minor.
- Completion of the minor may extend graduation date.
- Transfer of credits from other institutions may be eligible to satisfy the minor requirements based on advisor review and program approval.

Graduation Requirements

- To be given credit for the minor, undergraduate must:
 - maintain a GPA of 3.0 in the minor courses
 - Complete 18 credits from the minor

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (8 credits)

MATSE 201(3), MATSE 259(3), MATSE 460(1) MATSE 462(1)

ADDITIONAL COURSES (10 credits)

ESC 314(3), MATSE 202(3), MATSE 400(3), MATSE 401(3), MATSE 402(3), MATSE 410(3), MATSE 413(3), MATSE/ESC 417(3), MATSE 419(3), MATSE 430(3), MATSE 436(3), MATSE 471(1), MATSE 472(1), MATSE 496(1-18), MATSE 497 (1-9), PHYS 414(3)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-04-056A

Review Date: 1/10/17

Music Performance Minor

University Park, College of Arts and Architecture (MUSIC)

PROFESSOR R.J. DAVID FREGO, *Director, School of Music*

The minor in music performance serves a wide variety of needs among the students who elect it. Those who have studied voice or an instrument through their high school years may pursue that study at a more advanced level. Participants in bands, orchestras, and choirs want to continue that activity at a higher level. Some find the minor an important adjunct to other studies such as speech pathology and audiology, speech communication, or broadcasting. This minor provides students in very demanding majors to build music performance into their lives as a balancing influence. Admission to the minor depends upon a successful performance audition.

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

SUPPORTING COURSES AND RELATED AREAS (21 credits)

Select 8 credits in applied music through Level IV: Primary (Sem: 1-8)

Select 4 credits in ensembles (Sem: 1-8)

Select 3 credits of electives in MUSIC (Sem: 1-8)

Select 6 credits at the 400 level in MUSIC (Sem: 5-8)

Last Revised by the Department: Spring Semester 2010

Blue Sheet Item #: 38-06-009

Review Date: 04/13/2010

AA

Music Studies Minor

University Park, College of Arts and Architecture (MUSST)

PROFESSOR R.J. DAVID FREGO, *Director, School of Music*

The minor in music studies provides students the opportunity to conduct focused study on music theory, history and literature. The minor may also serve as an important adjunct to other studies such as speech pathology and audiology, speech communication, or broadcasting. Some students choose to add the music studies minor as a balancing influence to coursework in their majors; others relate music studies directly to their major. For example, a recent Schreyer Honors College history major did her thesis on song during the Civil War. Admission to the minor depends upon the ability to read musical notation, which is assessed by a music theory assessment test offered during the annual audition days. Each student registers for core courses in music theory, history and literature. Students usually opt to focus on one of the three areas in their upper-level courses.

A grade of C or better is required for all courses in the minor.

Scheduling recommendations by Semester Standing given like (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (8 credits)

MUSIC 131(2), MUSIC 132(2), MUSIC 231(2), MUSIC 331(2) (Sem: 1-4)

ADDITIONAL COURSES: (3 credits)

MUSIC 261(3) or MUSIC 262(3) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS: (10 credits)

Select 4 credits in ensembles (Sem: 1-8)

Select 6 credits at the 400-level in MUSIC (Sem: 5-8)

Last Revised by the Department: Spring Semester 2010

Blue Sheet Item #: 38-06-011

Review Date: 04/13/2010

Music Technology Minor

University Park, College of Arts and Architecture (MUTEC)

PROFESSOR R.J. DAVID FREGO, Director, School of Music

Administered by faculty from the College of Arts & Architecture's School of Music, School of Theatre, and Department of Integrative Arts, the minor in Music Technology is appropriate for undergraduate students seeking to apply domains of knowledge from their majors or General Education programs to issues of audio production and digital technology in music.

The program consists of prescribed foundation courses in musical acoustics, digital audio, sound design and audio recording. Supporting course work allows students to focus in advanced topics such as music software programming, multi-media, or entertainment systems.

The Music Technology Minor Committee is authorized to award a minor certificate to any undergraduate who, in addition to satisfying the degree requirements of his or her baccalaureate major, satisfies the requirements for the Music Technology minor. The completion of the minor is reflected by a formal notation in the student's official record at the time of graduation.

Students must declare a major before they may request admission to a minor. However, those interested in the music technology minor are encouraged to begin taking applicable courses as early as possible. Students must apply to the minor no later than the beginning of their 6th semester. Students who have earned at least a grade of C in INART 050, INART 258A and THEA 285 may apply for admission to the program by submitting an application to the Committee.

For more information about the music technology minor, check the School of Music website at <http://music.psu.edu/prospective/mustechminor.html>.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (15 credits)

INART 50 GN(3), INART 258A GA(3), MUSIC 8 GA(3) (Sem: 1-4)

THEA 285(3), THEA 484(3) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in consultation with the minor advisor with at least 3 credits at the 400 level. (Sem: 5-8)

Last Revised by the Department: Summer Session 2006

Blue Sheet Item #: 34-05-002; 40-02 RT-222; 41-02 RT230

Review Date: 2/28/06; 09/27/11

AA

Nanotechnology Minor

University Park, College of Engineering (NANO)

The Nanotechnology minor is designed to help prepare students from diverse disciplines for careers in a broad range of industries innovating with nanotechnology. The minor builds on the singular strengths of Penn State's nanofabrication facilities including its class 1 and class 10 clean rooms, its faculty, and existing academic programs. The minor provides students with fundamental knowledge and skills in simulation, design, modeling, syntheses, characterization, properties, processing, manufacturing, and applications at the nano scale.

As nanotechnology increasingly bridges across disciplines, a basic understanding of mathematics, physics, biology, and chemistry is recommended. To complete the 18 credit nanotechnology minor, students will take two prescribed courses (6 credits) in nanoscience fundamentals, and then select four additional courses (12 credits) from a growing list of courses that address the areas described in the previous paragraph. A grade of C or better is required for all courses in the minor.

In addition to nanotechnology career opportunities in microelectronics, information storage, optoelectronics, bioelectronics, pharmaceuticals, agriculture, medicine, life sciences and the sciences, the minor prepares undergraduate students to support major new nanotechnology research programs as graduate students. Interested 3rd and 4th year students from related fields in engineering, the chemical, physical, and the biological sciences, medicine, life, and agricultural sciences are encouraged to enroll.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: (6 credits)
ESC 312(3), ESC 313(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS: (12 credits)

Select 12 credits from an approved list, at least 6 credits must be at the 400 level. (Sem: 5-8)

Last Revised by the Department: Summer Session 2006

Blue Sheet Item #: 34-04-029

Review Date: 1/17/06

EN

Natural Resources Minor

University College, Penn State DuBois (NAT R)

The natural resources minor can complement majors in the earth sciences and life sciences, and provides an introduction to field techniques and technical writing. Areas of specialized study can include, but are not limited to, environmental assessment, forest and wetland evaluation and management, and wildlife management. Professional opportunities include work in environmental monitoring, such as endangered species and wetland delineation, restoration of disturbed land, and management of forested lands and wildlife areas.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS (18 credits)

In consultation with a natural resources adviser:

Select 3 credits in 100-level forest technology (Sem: 1-2)

Select 3 credits in 100-level wildlife technology (Sem: 1-2)

Select 6 credits of 200-level forest technology or wildlife technology (Sem: 3-4)

Select 6 credits of 400-level geography or geosciences courses (Sem: 5-8)

Last Revised by the Department: Summer Session 2006

Blue Sheet Item #: 34-04-068

Review Date: 1/17/06

UC

Natural Science Minor (NATSC)

Contacts: Altoona College, David Hurtubise, dxh40@psu.edu; Berks College, Ike Shibley, jas1@psu.edu; Eberly College of Science, Ron Markle, ram29@psu.edu

This interdepartmental minor in Natural Science is designed for nonscience students who wish to gain a better appreciation for science and the scientific method. The courses required in the minor include 3 to 4 credits of general education science designed for nonscience students, 3 to 4 credits of mathematical science, 8 to 9 credits of life or physical science, including some laboratory work, and 6 credits of 400-level science courses. Certain combinations of courses are disallowed (as listed in the curriculum description), and higher-level courses are generally accepted as substitutes for lower-level courses if both are offered by the same department. Any substitutes for laboratory courses must also be laboratory courses. Advising for students in this minor will be available through the Eberly College of Science Academic Advising Center and approval of curriculum exceptions will be through the faculty committee and professor in charge of the program.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 20-23 credits

PRESCRIBED COURSE (1 credit)
SC 400(1) (Sem: 5-8)

ADDITIONAL COURSES (14-17 credits) [\[62\]](#)

Select 3-4 credits from ASTRO 1 GN(3), ASTRO 10 GN(2) and ASTRO 11 GN(1), BMB 1 GN(3), BISC 1 GN(3), BISC 2 GN(3), BISC 3 GN(3), BISC 4 GN(4), CHEM 1 GN(3), CHEM 3 GN(3), MICRB 106 GN(3) and MICRB 107 GN(1), PHYS 1 GN(3) (Sem: 1-4)

Select 3-4 credits from CMPSC 101 GQ(3), CMPSC 121 GQ(3), CMPSC 201 GQ(3) or CMPSC 202 GQ(3), CMPSC 203 GQ(4), MATH 110 GQ(4), MATH 140 GQ(4), STAT 200 GQ(4), STAT 250 GQ(3) (Sem: 3-6)

Select 8-9 credits from BIOL 11 GN(3) and BIOL 12 GN(1), BIOL 110 GN(4), CHEM 110 GN(3) and CHEM 111 GN(1), CHEM 112 GN(3) and CHEM 113 GN(1), MICRB 201(3) and MICRB 202(2), PHYS 250 GN(4), PHYS 251 GN(4) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (5 credits)

Select 0-2 credits of 496 (independent studies) courses from the Eberly College of Science course offerings (Sem: 5-8)

Select 3-5 credits of 400-level courses (other than independent studies) from the Eberly College of Science course offerings (Sem: 5-8)

[62] A student may not use credit for BISC 1 GN(3) or BISC 2 GN(3) along with credit for BIOL 11 GN(3) and BIOL 12 GN(1), or BIOL 110 GN(4); CHEM 1 GN(3) or CHEM 3 GN(3) along with credit for CHEM 110 GN(3) and CHEM 111 GN(1) or CHEM 112 GN(3) and CHEM 113 GN(1); PHYS 1 GN(3) along with credit for PHYS 250 GN(4) or PHYS 251 GN(4); MICRB 106 GN(3) and MICRB 107 GN(1) along with credit for MICRB 201(3) and MICRB 202(2).

Last Revised by the Department: Summer Session 1995

Blue Sheet Item #: 23-04-042

Review Date: 9/13/02

UCA Revision #1: 8/9/06

UCA Revision #2: 7/30/07

Neuroscience Minor

Intercollege Program (NEURO)

Contact: Sonia A. Cavigelli, sac34@psu.edu

The intercollege minor in neuroscience is designed for the student desiring an in-depth knowledge about the basic and functional aspects of the nervous system. Students in several disciplines ranging from nutrition to psychology to molecular biology could benefit from comprehensive study of the neurosciences in preparation for technical, professional, or research careers. The neurosciences as envisioned here are broadly based, and instruction available spans the levels of investigation from molecular to behavioral and cognitive. Majors complemented by this minor would include, but not be limited to, psychology, biology, biochemistry, nutrition, human development and family studies, genetics, biobehavioral health, kinesiology, animal and poultry science, and veterinary science.

Only courses in which the student earns a grade of C or better may be counted toward fulfillment of the requirements for the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

PSYCH 260(3) (Sem: 3-4)

BIOL 469(3), BIOL 470(3) (Sem: 5-6)

ADDITIONAL COURSES (9 credits)

Select 9 credits from BBH 410(3), BBH 432(3), BBH 451(3), BBH 497(1-9) (lab), BIOL 472(3), BIOL 473(2), BIOL 479(3), KINES 483(3), KINES 484(3), PSYCH 462(3), PSYCH 475(3), PSYCH 478(3), (Sem: 5-8)

Last Revised by the Department: Fall Semester 1997

Blue Sheet Item #: 26-01-082

Review Date: 1/30/00

UCA Revision #1: 11/6/06

Contact updated: 9/22/14

Nutritional Sciences Minor

University Park, College of Health and Human Development (NUTR)

Contact: Brenda Eissenstat, bre2@psu.edu

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (11 credits)

NUTR 251 GHA(3) (Sem: 1-4)

NUTR 358(2) (Sem: 3-6)

NUTR 445(3), NUTR 446(3) (Sem: 5-6)

SUPPORTING COURSES AND RELATED AREAS (7 credits)

Select 7 credits from NUTR courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2002

Blue Sheet Item #: 30-07-094

Review Date: 4/8/03

HH

Off-Road Equipment Minor

University Park, College of Agricultural Sciences (OFFRD)

This interdisciplinary minor complements several engineering, agricultural, and mining degrees, helping students understand some specific technological aspects of mobile equipment (from lawn tractors to large excavators). The minor would strengthen the program for students with machinery interests by exposing them to several of the technical aspects of off-road equipment such as electronics, power generation, power transmission, traction, ergonomics, and safety.

The minor in Off-Road Equipment requires 18-20 credits from the approved courses. Courses in the minor have prerequisites including calculus, physics, and, depending on the student's major, at least one engineering or engineering technology type course (e.g., BRS 221). These courses should be completed prior to entering the minor.

A grade of C or better is required for all courses taken to satisfy the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18-20 credits

PRESCRIBED COURSES (3 credits)

ASM 420(3) (Sem: 6-8)

ADDITIONAL COURSES (15-17 credits)

Select 3 credits from ASM 320(3) or ME 431(3) (Sem: 5-8)

Select 3 credits from ASM 310(3); BE 306(3); ME 360(3) (Sem: 5-8)

Select 3-4 credits from BE 305(3), BRS 428(3), or ME 345(4) (Sem: 5-8)

Select 3-4 credits from ASM 424(3), AGRO 423(3), AGRO 425(3), HORT 408(4), or TURF 425(3) (Sem: 5-8)

Select 3 credits from BE 461(3) or BRS 426(3) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-05-001

Review Date: 2/21/17

UCA Revision #2: 7/30/07

AG

Organizational Leadership Minor

University Park, College of the Liberal Arts (OLEAD): offered via World Campus

PROFESSOR DENNIS GOURAN, Professor-in-charge

This interdisciplinary online minor is designed for World Campus students in any major who wish to supplement their knowledge in the areas related to leadership in organizations. The OLEAD minor focuses on the development of: (1) understanding of the role, functions, and enactment of leadership as an instrument of influence in the modern organization; (2) familiarity with pertinent scholarly inquiry; and (3) competencies essential to success in leadership. Leadership is of interest in numerous disciplines. The curriculum in Organizational Leadership provides the opportunity to select from them on the basis of specialized interests relating to: business administration, communication arts and sciences, criminal justice, economics, history, labor studies and employment relations, philosophy, political science, psychology, sociology, and women's studies. The OLEAD minor is of value to anyone pursuing a baccalaureate degree who envisions being, or is, in a position of authority (manager, supervisor, executive, officer, and the like) in an organization.

The minor consists of 18 credits, at least 9 of which must be at the 400 level.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits
(at least 9 credits at the 400 level)

PRESCRIBED COURSES (12 credits)

OLEAD 100 GS(3) (Sem: 1-6)

OLEAD 409(3), OLEAD/LER 464(3), OLEAD/LER 465(3) (Sem: 4-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits in the approved list of courses in the OLEAD Curriculum (Sem: 4-8)

Last Revised by the Department: Fall Semester 2012

Blue Sheet Item #: 41-04-063

Review Date: 01/15/2013

Operations & Supply Chain Management Minor

Penn State Erie, The Behrend College (OPSCM)

Contact(s): Ray Venkataraman, rrv2@psu.edu

This minor is designed primarily for students enrolled in non-business majors, especially those in engineering and engineering technology, who wish to augment their majors with further studies in operations and supply chain management. The objective of the minor is to acquaint these students with the issues and methods associated with managing operations within manufacturing or service industries. Relevant studies include principles of management, operations management, logistics systems, procurement, planning and control, enterprise resource planning (ERP), and project management.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES: (6 credits)

MGMT 301(3), SCM 301(3) (Sem: 5)

ADDITIONAL COURSES: (13 credits)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 5)

Select 9 credits from the following list:

- SCM 465(3) (Sem: 6)

- SCM 455(3) or SCM 460(3) (Sem: 7)

- SCM 445(3), MGMT 409(3) (Sem: 8)

Last Reviewed by the Department: Summer Session 2011

Blue Sheet Item #:40-01-038

Review Date: 8/16/2011

BD

Poultry and Avian Science Minor

University Park: College of Agricultural Sciences (P A S)

The Poultry and Avian Science minor is designed for students who wish to supplement their academic major with studies focused on the biology and management of avian species, with an emphasis on domestic fowl. In recognition of the diverse career opportunities in the modern poultry and game bird industries, the minor is designed to also accommodate students with primary interests in agribusiness management, food science, and wildlife science. Students are required to complete a minimum of 18 credits (9 credits at the 400 level). AN SC 211, AN SC 311, and AN SC 425(VB SC 425) provide a foundation of knowledge pertaining to both avian sciences and the commercial poultry industry, while additional courses selected by the student will allow for further specialization in the foundation animal science disciplines, agribusiness management, food science, and wildlife and fisheries science. In addition, credits from poultry or avian internship experiences and/or independent study projects may also be applied towards meeting the requirements of the minor.

The University's Poultry Education and Research Center is used extensively for supplementing classroom work with hands-on laboratories. The flexibility of the minor permits program planning commensurate with an individual's interests and professional goals, and should enhance the student's ability to compete for related positions in industry, government, or academia (graduate or professional school).

The prerequisites for the minor's prescribed courses are BIOL 110 (for ANSC 211), ANSC 100 (for ANSC 311), and ANSC 211, ANSC 311, and MICRB 106 & 107 or MICRB 201 & 202 (for ANSC 425/VBSC 425).

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (9 credits)

ANSC 211(3) (Sem: 1-4)

ANSC 311(3) (Sem: 5-7)

ANSC/VBSC 425(3) (Sem: 6-8)

ADDITIONAL COURSES (9 credits)

Select 3 credits from: AGBM 302(3), AGBM 338 IL(3), ANSC 207(2), ANSC 208(1) (Sem: 3-6)

AN SC 300 GN(3), ANSC 301(3), ANSC 322(3), ANSC 395(1-3) [\[*\]](#), WFS 300(2), WFS 301(2) (Sem: 5-8)

Select 6 credits from: AGBM 407(3), AGBM 408(3), AGBM 420(3), AGBM 460(3), ANSC 418(3), ANSC 420(4), ANSC 421(2), ANSC 423(3), ANSC 496(3) [\[*\]](#), ANSC 499 IL(2), FDSC 408(3), FDSC 409(2), FDSC 411(3), FDSC 415(3), VBSC 420(3), WFS 406(2), WFS 407(3), WFS 447(3) (Sem: 7-8)

[*] AN SC 395 and AN SC 496 must have a poultry or avian biology emphasis.

Lasted Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-002

Review Date: 04/05/2016

AG

Planetary Science and Astronomy Minor

University Park, Eberly College of Science (PASTR)

Planetary Science and Astronomy minors will study the Solar System, stars, galaxies and the universe as a whole. Students will survey a wide variety of topics in astronomy and will learn to solve problems to see how this general knowledge has been obtained. Students will use telescopes to obtain astronomical data, and will learn to analyze these data to constrain astronomical theories. Communication of these topics, both oral and written, to the public and to their peers will be emphasized, as will logic and general problem-solving skills. It will serve students who want to acquire a significant knowledge of the universe as they pursue majors in unrelated fields of study. For example, this minor will serve students who are seeking careers in science education at the 6-12 level, in elementary education, in science journalism, and in geoscience.

A grade of C or better is required for all courses in the minor.

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES (7 credits)

ASTRO 401(4), ASTRO 402(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 3 credits from ASTRO 1 GN(3), ASTRO 5 GN(3), ASTRO 6 GN(3), ASTRO 10 GN(2) and ASTRO 11GN(1), ASTRO 291 GN(3) (Sem: 1-4)

Select 9 credits from ASTRO 120 GN(3), ASTRO 130 GN(3), ASTRO 140 GN(3), ASTRO 292 GN(3) (Sem: 2-6)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-05-145

Review Date: 02/19/2013

Pennsylvania Studies Minor

University Park, College of the Liberal Arts (PASTU)

This minor is for students who want to emphasize the history, culture, politics, and other important features of Pennsylvania in their academic programs. The minor consists of 18 credits, at least 6 of which must be at the 400 level. A certificate is awarded to students who complete the requirements of the minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

HIST 12 GH;US(3) (Sem: 1-4)

ADDITIONAL COURSES (6-9 credits)

Select 6-9 credits from GER 157 GH;US(3), HIST 150 US(3), HIST 200 US(3), AMST 50 GH(3), or PLSC 125(3) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (6-9 credits)

Students may select, in consultation with their Pennsylvania Studies adviser, 6-9 credits from among courses that focus substantially on Pennsylvania. At least 6 credits must be at the 400 level. A partial list of such courses includes LER 100 GS(3), LA 496(1-18), PLSC 130 GS;US(3), PLSC 426(3), SOC 454(3). With the approval of the Pennsylvania Studies adviser, students may count up to 3 credits for internships in Pennsylvania. Students may enroll in the College of the Liberal Arts internship program or a departmental internship program. (Sem: 3-8)

Last Revised by the Department: Summer Session 1988

Review Date: 3/12/02

LA

Peace and Conflict Studies Minor

University College: Penn State Brandywine (PEACE)

This minor may be pursued by students in any major. It is designed to help students take a coherent set of courses organized around the study of the sources of international conflict, peace movements, and peace building. The minor requires 18 credits, of which at least nine must be upper division, including six credits at the 400 level. Students will be required to take two prescribed courses, one introductory and one capstone. They also will take three credits of additional courses with an international focus and nine credits from a list of supporting courses, which includes the study of conflict in race relations, family, community, and the development of personal peace as a precursor to peace building. The full requirements with the lists of additional and supporting courses are available in the Peace and Conflict Studies program office. Substitutions for requirements require the permission of the Peace and Conflict Studies minor adviser at Penn State Brandywine.

See this minor list for Brandywine at www.brandywine.psu.edu/Academics for additional information.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

PLSC 91(3) (Sem: 1-4)

PLSC 491(3) (Sem: 7-8)

ADDITIONAL COURSES (3 credits)

INTU 200 GS(3) or PLSC 14 GS;IL(3) (Sem: 3-8)

(INTU 200 GS(3) and PLSC 14 GS;IL(3) cannot both be taken for credit)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits from the additional course list in the Peace and Conflict Studies program office (Sem: 3-8)

Select 6 credits from the supporting course list in the Peace and Conflict Studies program office (Sem: 3-8)

Last Revised by the Department: Spring Semester 1995

Blue Sheet Item #: 22-06-013

Review Date: 1/30/00

College change 9/17/2012

Effective: Spring 2013

Philosophy Minor (PHIL)

Contact: Penn State Fayette, Evelyn Pluhar-Adams, exp5@psu.edu; College of the Liberal Arts, Emily Grosholz, erg2@psu.edu

Many students find that their studies in their major field can be profitably supplemented by pursuing their studies in philosophy. The Philosophy minor is designed for students who desire a significant background in philosophy while majoring in a different field. Students from many disciplines pursue the Philosophy minor, including English, History, Physics, Mathematics, Management Studies, and so on. Declaring a minor in Philosophy will allow you to continue your philosophy studies throughout your degree, and you will receive a certificate in Philosophy when you graduate.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

SUPPORTING COURSES AND RELATED AREAS (18 credits)

In consultation with a faculty adviser:

Select 6 credits of Philosophy courses (Sem: 1-6)

Select 6 credits of Philosophy courses at the 200 level (Sem: 3-6)

Select 6 credits of Philosophy courses at the 400 level (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

Photography Minor

Contact: Keith Shapiro, kds3@psu.edu

Colege of Arts and Architecture (PHOTO_UMNR)

Students in the Photography Minor will gain access to skills and knowledge necessary to identify and create professional quality photographic images. The learning outcomes include technical and intellectual proficiency, creative skills and capabilities, commercially oriented skills and knowledge, collaborative and visual communication skills and experiences, cultural awareness and ethical understanding regarding the use of images and life-long learning skills. It will raise students' overall level of proficiency and enhance their life-long learning skills in image making. Professional photographic skills are readily adaptable for use in a wide variety of majors and careers that rely on or benefit from the use of photography. The minor strengthens existing majors where making or using professional quality photographic imagery would be an advantage.

The minor is intended for students in any major who have a need or desire to acquire professional photographic skills and knowledge. The minor includes two prescribed classes, PHOTO 303 (3 cr.) and PHOTO 404 (4 cr.). These two courses focus students on client-based commercially oriented photographic skills and knowledge. Students are then free to choose the remaining 12 credits of additional PHOTO courses with the intent that with these courses they will tailor their curriculum to suit their specific need or interest. Students in the Photography Minor will thus benefit from access to the professionally oriented PHOTO courses developed for the Professional Photography (B.Des) major.

Retention Requirements: Retention will be determined through verification of sustained academic growth as demonstrated by earning of grades of C or higher within the Photography minor. Failure to do so is grounds for an academic warning, with clear written strategies and a time frame for the student to return to good standing. Should the student not address the issue, the faculty may advise the student into a different program or minor.

A grade of C or better is required for all courses in the minor.

Some courses may require prerequisites.

For a Minor in Photography, a minimum of 19 credits is required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES: (7 credits)

PHOTO 303(3), PHOTO 404(4)

ADDITIONAL COURSES (12 credits)

Select 9 credits of PHOTO courses (Sem: 1-8)

Select 3 credits of 400-level PHOTO courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-013

Review Date: 8/22/17

Physics Minor

Eberly College of Science (PHYS)

Contact: Eberly College of Science, Richard Robinett, rg9@psu.edu

Contact: Behrend College, Bruce Wittmershaus, bpw2@psu.edu

Contact: Penn State Berks, Leonard Gamberg, lpg10@psu.edu

The Department of Physics offers a minor for students who wish to expand upon their study in this fundamental discipline, beyond the introductory courses (PHYS 211, PHYS 212, PHYS 213, PHYS 214). In addition to an additional course in modern physics (PHYS 237, which includes introductions to relativity and quantum theory, as well as applications), students take two 400-level PHYS courses for a total of 6-8 credits. The Physics minor is useful for students in many STEM disciplines who wish to extend their studies in this fundamental field, as a background for graduate study or work in a variety of technical fields.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 29-31 credits

PRESCRIBED COURSES (23 credits)

MATH 140 GQ(4), MATH 141 GQ(4), PHYS 211 GN(4), PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2), PHYS 237(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (6-8 credits)

Select two 400-level PHYS courses, except PHYS 444(2), 446(1), 457(1-3), 457W(3), 494(1), 494H(1), 495(1), 496(1), 496H(1) or 499(1) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-04-081

Review Date: 1/12/16

UCA Revision #1: 8/31/06

SC

Political Science Minor (PL SC)

Contact: Altoona College, Dan DiLeo, dxd22@psu.edu; Capital College, Alexander Siedschlag, aus50@psu.edu; Penn State Berks, Randy Newnham, ren2@psu.edu; Penn State Fayette, Brad Whitset, bcw4@psu.edu; College of the Liberal Arts, Suzanna Linn, sld8@psu.edu

The Political Science minor consists of 18 credits with at least one course in each of the following Political Science areas: American, theory/methodology, comparative, and international relations. Six (6) of these 18 credits must be at the 400 level.

When electing this minor, the student should have junior (fifth-semester) standing. Special attention should be given to the fact that courses used to satisfy general education, degree requirements, electives, and major requirements may also be used to satisfy minor requirements.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (18 credits)

Select 18 credits in Political Science (at least 6 credits at the 400 level) (Sem: 3-8)

Include at least one course in each of the following areas: American, Comparative, International Relations, and Theory

Last Revised by the Department: Fall Semester 1999

Blue Sheet Item #: 28-01-056

Review Date: 11/10/03

LA

Politics and Government Minor

Penn State Erie, The Behrend College (POGO)

Contact(s): Rob Speel, rws15@psu.edu

The study of politics consists of several related subfields, such as American Government, public policy and administration, comparative politics or the study of foreign governments, international relations, and political theory. Students who pursue this minor are expected to develop research and writing skills, in addition to critical analytical skills. Because the policy making process and the processes of globalization affect us in virtually all areas of our lives, the minor is appropriate for supporting the study of any of the majors offered at the College. Similarly, the minor provides an invaluable understanding of the political world that is useful in any career that has an impact on or is affected by public life. Students who study politics at Behrend also often pursue graduate professional studies in law or in other fields in graduate schools.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

PLSC 1 GS(3), PLSC 3 GS;IL(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits (at least 6 credits at the 400 level) from PL SC courses (Sem: 5-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-024

Review Date: 08/20/13

BD

Polymer Science Minor

University Park, College of Earth and Mineral Sciences (PLMSC)

Robert Kimel, Associate Head Materials Science and Engineering

The goal of the polymer science minor is to produce graduates who have a first-hand knowledge of the relationships between the synthesis, structure, properties and processing of polymer materials. Students are required to take MATSE 443 (3 credits), MATSE 441; MATSE 445; MATSE 446; MATSE 447 which provides a broad overview of the subject, then select 3 credits chosen from a suite of courses that deal with polymer synthesis, microstructure and morphology, properties and processing.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 23 credits

PRESCRIBED COURSES (8 credits)

CHEM 210(3), MATH 231(2), MATSE 443(3) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)

Select 3 credits from: BMB 474(3), EMCH 446(3), MATSE 447(3), MATSE 473(1), MATSE 474(1), MATSE 494W(3), and MATSE 496(1-3) (Sem: 5-8)

Select 12 credits from: MATSE 441(3), MATSE 442(3), MATSE 444(3), MATSE 445(3), or MATSE 446(3) (Sem: 5-8)

Lastest Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-01-061A

Review Date: 8/25/2015

UCA Revision #1: 9/1/06

EM

Petroleum and Natural Gas Engineering Minor

University Park, College of Earth and Mineral Sciences (PNG E)

PROFESSOR Russell Johns, *Program Officer*

The minor in petroleum and natural gas engineering is for students interested in the drilling and production of oil and gas. It provides an opportunity for students to understand and appreciate the relationship between petroleum and natural gas demand, production and their environment impact. Students are exposed to the basic courses in petroleum and natural gas extraction, particularly as they relate to drilling, production and characterization. A minimum of 23 credits is required for the minor. A student enrolled in this minor must receive a grade C or better in all courses in the minor. Advising is available through the professor in charge.

Scheduling Recommendations by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 23 credits

PRESCRIBED COURSES (14 credits)

PNG 405(3), PNG 406(1), PNG 410(3), PNG 440(3), PHYS 211 GN(4) (Sem: 5-7)

ADDITIONAL COURSES (9 credits)

Select 9 credits from the following list:

PNG 411(1), PNG 420(4), PNG 425(3), PNG 430(3), PNG 450(3), PNG 451(1), PNG 475(3), PNG 480(3), PNG 482(1), PNG 489(3), PNG 496(1) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-01-061

Review Date: 8/25/2015

Review Date: 09/28/2010

Portuguese Minor

University Park, College of the Liberal Arts (PORT)

The Minor in Portuguese is designed to cultivate our students' understanding, respect, and appreciation of the rich literary and cultural traditions of Portuguese-speaking peoples; to provide a sound foundation for further study related to the Portuguese worlds; and to develop our students' ability to analyze literary and cultural works in Portuguese.

Through their coursework in the Minor, students will be introduced to the disciplines of Portuguese letters, and also explore connections between Portuguese and other disciplines in the humanities or in the social sciences. For the Portuguese Minor, students will need a minimum of 19 credits of Portuguese (at least 6 of which must be at the 400 level), with grades of C or better. Students will be able to select from a comprehensive list of courses that can count toward the Minor. Students are held to the requirements that are in effect when they officially declare the Minor. They can take more than the minimum 19 credits if they so desire; there is no penalty for students who change their minds and ultimately do not complete all the Minor requirements (i.e., they are not disqualified from graduating if they do not complete declared Minor requirements; they simply do not receive the Minor).

The prerequisite for the Minor's prescribed PORT 003 course is PORT 002.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES (7 credits)

PORT 3(4), PORT 405(3)

SUPPORTING COURSES (12 credits)

Select 9 credits of PORT courses beyond the 003 level

Select 3 credits of 400-level PORT courses

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-047

Review Date: 4/5/2016

Plant Pathology Minor

University Park, College of Agricultural Sciences (PPATH)

The Plant Pathology minor is designed for students who wish to learn more about the causes and control of plant diseases. These students may pursue careers in commercial crop production, industrial sales, private consulting, extension, or research. Increasing emphasis on biological control, integrated pest management, and sustainable agricultural practices requires knowledge of plant pathogen biology, host-parasite interactions, and environmental parameters influencing disease development. The Plant Pathology Minor focuses on these areas and gives students the background necessary to develop or utilize environmentally sound disease management strategies. This program is designed to supplement majors in any field of the biological sciences and also can be used to prepare students for graduate studies in Plant Pathology.

The minor in Plant Pathology requires 22 credits in approved courses in addition to the major requirements of the student's choice.

Students must receive a grade of C or better in all courses required for the minor.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

REQUIREMENTS FOR THE MINOR: 22 credits

PRESCRIBED COURSES (7 credits)[\[1\]](#)

BIOL 110 GN(4) (Sem: 1-4)

*3 credits of PPEM 496 (1-18) (Sem: 5-8)

ADDITIONAL COURSES (15 credits)[\[1\]](#)

**Select 3 credits from: PPEM 300 GN(3), PPEM 405(3) (Sem: 5-6)

Select a minimum of 12 credits from: AGEKO 121 GN(3), AGEKO/ENT 457(3), PPEM 120 GN(3), PPEM 300 GN(3), PPEM 318(2), PPEM 405(3), PPEM 412(3), PPEM 416(3), PPEM 417(3), PPEM 425(4), PPEM 430(3), PPEM 454(3), *PPEM 496(1-3), PPEM 497(1-3), and the departmental list of additional courses for the Plant Pathology Minor with the approval of the minor adviser. (Sem: 3-8)

*Students must select, in consultation with the Plant Pathology Minor adviser, at least 3 credits of PPEM 496 (Independent Study) working with one or more faculty in the department of Plant Pathology and Environmental Microbiology. An additional three Independent Study credits may be applied to the Minor requirements as Additional Courses.

** Students may select one of these two courses for the second list of Additional Courses, but the same course cannot be counted toward both lists.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

AG

Product Realization Minor

University Park, College of Engineering (PRODR)

This 21-credit interdisciplinary minor is designed for any engineering student who is interested in state-of-the-art practice in integrated product/process design and manufacturing. The program culminates with a one-semester project involving the design and manufacture of a new product.

The purpose of the minor is to offer students state-of-the-art practice in integrated product/process design and manufacturing. Students completing the minor should:

- understand the interaction of design and manufacturing through practical examples;
- be familiar with the entrepreneurial skills needed to transfer a new product from initial idea to market;
- understand the technical and management aspects of concurrent engineering and total quality management; and
- have hands-on experience in designing and manufacturing a product, organizing and managing the effort, and interacting with the customer.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSES (9 credits)

ME 240(3) (Sem: 1-4)

ENGR 407(3) (Sem: 5-6)

IE 466(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

Select 9 credits in Product Design, Quality Engineering, and Manufacturing Processes courses approved by the professor in charge of the minor (Dr. Simpson).

Example courses include: EE 310, EE 441, IE 305, IE 306, IE 311, IE 312, IE 424, IE 428, ME 340, ME 445 (Sem: 5-8)

Select a 3-credit senior project: team-based design or industrial projects course, as approved by the coordinator (Sem: 7-8)

Last Revised by the Department: Summer Session 2007

Blue Sheet Item #: 35-01-138

Review Date: 8/29/06

UCA Revision #2: 7/30/07

EN

Project and Supply Chain Management

Penn State Erie, The Behrend College (PRSCM)

Contact: Ray Venkataraman (rrv2@psu.edu)

The Project and Supply Chain Management Minor is designed to introduce students within the School of Business to advanced topics in supply chain and project management. The minor can provide options and opportunities beyond those offered by a major program of study. Students enrolled in nonbusiness majors should explore the minor in Operations and Supply Chain Management whereas students in a business major can pursue the Project and Supply Chain Management Minor.

For a Minor in Project and Supply Chain Management a minimum of 18 credits are required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

Requirements for the Minor: 18 credits

PRESCRIBED COURSES (6 credits)

MGMT 301(3)[18], SCM 301(3)[18]

ADDITIONAL COURSES (12 credits)

Select 3 credits: MGMT 410(3)[18]; BA 421(3)[18]

Select 3 courses (9 credits) of 400-level MGMT and SCM courses from the following list. The choices must include at least one MGMT and one SCM course:
MGMT 415(3); MGMT 418(3); SCM 445(3); SCM 455(3); SCM 460(3)

Last Revised by the Department: Spring 2016

Blue Sheet Item #: 44-06-030A

Review Date: 2/23/2016

Psychology Minor (PSY)

Contact: Abington College, Michael Bernstein, mjb70@psu.edu; Altoona College, Brad Pinter, tbp1@psu.edu; Capital College, Cobi Micahel, cmk292@psu.edu; Penn State Beaver, Kevin Bennett, klb48@psu.edu; Penn State Berks, Erin Johnson, eem139@psu.edu; Penn State Brandywine, Pauline Guerin, pbq12@psu.edu; Penn State Fayette, Russ Filburn, rrf1@psu.edu; Penn State Greater Allegheny, Eilizabeth Mazur, exm32@psu.edu; Penn State Lehigh Valley, Kevin Kelley, kik13@psu.edu; Penn State New Kensington, K. R. Bridges, krb3@psu.edu; Penn State Schuylkill, Helen Hendy, hl4@psu.edu; College of the Liberal Arts, Richard Carlson, cvy@psu.edu

The Psychology minor is designed to provide undergraduate students with a broad overview of topics and domains within psychology, knowledge and skills related to research methods in psychology, and deeper knowledge of research, theory, and application in one or two specific content domains. Students completing this minor will find a flexible selection of coursework in psychology. The content domains from which students may select courses include biological, clinical, cognitive, developmental, industrial-organizational, and social psychology. Students may choose courses that emphasize theory or application of psychological principles. A number of these courses examine the application of psychological research to societal issues.

The required research methods course, PSYCH 301, carries a statistics prerequisite that can be met by either PSYCH 200 or STAT 200. STAT 200 does not count toward the minimum 18 credits required for the minor. Students minoring in Psychology at University Park are encouraged to consult the Psychology Advising Center early in the process of planning their minor.

The Psychology minor may be appropriate for students pursuing graduate training or professional careers in fields such as health, business, education, and human services, as well as in psychology.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (7 credits)

PSYCH 100 GS(3), PSYCH 301(4) (Sem: 1-4)

ADDITIONAL COURSES (11 credits)

Select 11 credits (at least 6 credits at the 400 level) in PSYCH (Sem: 5-8)

Last Revised by the Department: Fall Semester 2001

Review Date: 12/20/02

UCA Revision #1: 8/14/06

Psychological Science Minor

Penn State Erie, The Behrend College (PSYSC)
University College: Penn State Fayette

Contact: Penn State Erie - Victoria Kazmerski, vak1@psu.edu
Penn State Fayette - John Rapano, jvr3@psu.edu

The Psychology minor is designed to provide undergraduate students with a broad overview of topics and domains within psychology, knowledge and skills related to research methods in psychology, and deeper knowledge of research, theory, and application in one or two specific content domains. Students completing this minor will find a flexible selection of coursework in psychology.

A grade of C or better is required for all courses in the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)
PSYCH 100 GS(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (15 credits)
Select 15 credits (at least 6 credits at the 400-level) from PSYCH courses (Sem: 5-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-025

Review Date: 08/20/13

UCA Revision #1: 8/14/06

BD

Professional Writing Minor

*Berks College (PWRIT)
Penn State Altoona
University College, Penn State Hazleton*

The minor in Professional Writing is intended to prepare students from all degree programs within the Berks College (with the exception of the major in Professional Writing) to write effectively in a variety of workplace and academic settings. Theory courses provide the necessary background to help students understand and appreciate the larger issues surrounding the writing and reading of texts. At the same time, practice-oriented courses draw upon the strategies and techniques of practicing writers outside and inside of the University, including workshops, peer conferencing, collaborative writing, portfolio preparation, and internships.

Students may not count courses used to satisfy General Education Writing/Speaking Skills.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)
ENGL 211W(3) (Sem: 3-6)

ADDITIONAL COURSES (15 credits)

Select 15 credits from the following:

CAS 214(3), COMM 260W(3), COMM 320(3), COMM 370(3), ENGL 110(2-6), ENGL 212(3), ENGL 213(3), ENGL 215(3), ENGL 250(3), ENGL 415(3), ENGL 416(3), ENGL 417(3), ENGL 418(3), ENGL 419(3), ENGL 420(3), ENGL 421(3), ENGL 471(3), ENGL 472(3), ENGL 473(3), ENGL 474(3), ENGL 480(3), ENGL 491(3), ENGL 495(3), ENGL 497(3) (Sem: 3-8)

Last Revised by the Department: Fall Semester 2011

Blue Sheet Item #: 40-04-021

Review Date: 01/10/2012

BK

Residential Construction Minor

University Park, College of Engineering (RCNEN)

The objective of the Residential Construction Minor is to provide an opportunity for students to gain an understanding of the residential building construction topics and issues with emphasis on sustainable land development, design and construction of residential buildings, as well as construction management of residential projects. Residential building construction is a unique interdisciplinary field that draws upon civil and architectural engineering, architecture, real estate, management, finance, and marketing disciplines, and design principles including economical, safe, and serviceable structural design, green building systems design, sustainable land development, and construction management. This minor is expected to be primarily of interest to student from Civil and Environmental Engineering, Architectural Engineering, and Architecture majors, but students from other majors can also enroll in this minor. This minor will help students to increase their competitiveness for employment in residential market and construction industry.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 22 credits

PRESCRIBED COURSES (10 credits)

AE 470(3), AE 471(3), ARCH 412(3), CE 411(1) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

- Architecture Track - Take 12 credits from the following: AE 211(3), AE 421 (3), AE 422(3), FIN 100(3), or RM 303(3) (Sem: 3-8)
- Architectural Engineering Track - Take 12 credits from the following: AE 202(3), AE 372(3), AE 402(3), AE 404(3), AE 454(3), AE 456(3), AE 542(3) or BE 462(3) (Sem: 3-8)
- Civil Engineering Track - Take 12 credits from the following: AE 432(3), AE 542(3), BE 462(3), CE 332(3), CE 341(3), or CE 410(3) (Sem: 5-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-05-036

Review Date: 02/24/2015

Rhetoric Minor

University Park, College of the Liberal Arts (RHET)

The Rhetoric Minor provides undergraduate students an opportunity to acquire special competence in the history, theory, and criticism of civic discourse and cultural practices. It brings together courses from both the Department of English and the Department of Communication Arts and Sciences, from which students may learn about the nature and function of rhetoric in politics, the professions, the classroom, and the media. The list of course offerings is designed to feature applied as well as theoretical approaches, and allows students to explore the subject in breadth as well as depth. Students completing the minor will command a greater knowledge of an appreciation for the significance of rhetoric as a central component of civic life.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

A minimum of 6 credits at the 400 level; maximum of 6 credits may be double-counted.

PRESCRIBED COURSES (6 credits)

CAS 301(3), ENGL 471(3) (Sem: 3-8)

ADDITIONAL COURSES (9 credits)

Select 9 credits from the following course list:

CAS 175 GH(3), CAS 311(3), CAS 321(3), CAS 375(3), CAS 411(3), CAS 415(3), CAS 420(3), CAS 426W(3), CAS 475(3), CAS 478(3), ENGL 415(3), ENGL 416(3), ENGL 417(3), ENGL 420(3), ENGL 472(3), ENGL 473(3), ENGL 474(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (3 credits)

Select 3 credits from the following course list in consultation with adviser.

CAS 499 IL(3) or ENGL 499 IL(3), L A 495(3), CAS 494H(3) or ENGL 310(3), ENGL 487(3) (Sem: 5-8)

Last Revised by the Department: Summer Session 2007

Blue Sheet Item #: 35-05-117

Review Date: 3/6/07

LA

Rehabilitation and Human Services Minor

University Park, College of Education (RHS)
University College, Lehigh Valley, Lehigh Cundari, jac42@psu.edu

PROFESSOR JAMES HERBERT, *Program Coordinator*
PROFESSOR JAMES HERBERT, *in charge of major*
PROFESSOR DEIRDRE O'SULLIVAN, *in charge of minor*

The minor in Rehabilitation and Human Services supplements the educational needs of students across disciplines who wish to gain advanced knowledge and skills related to health, disability, and interpersonal interactions. In today's society, due to medical advances and an aging population, more people are living longer with chronic illnesses and disabilities and many jobs require advanced interpersonal skills and knowledge of health, disability, and human service skills. The minor in RHS is responding to this growing need by providing students with specific applied knowledge about living and working with a disability or chronic illness, as well as adjusting to a variety of social needs and problems, such as poverty, addiction, family violence, and homelessness. The minor is appropriate for any student interested in learning how to effectively work with people, particularly as they adapt and adjust to life with a disability. The minor enhances the education of students majoring in social and behavioral sciences, as well as business majors who work in settings that hire and maintain work environments for persons with chronic illnesses and disabilities. The minor will also enhance graduate study preparation for many students interested in working with people in applied settings. For the minor in Rehabilitation and Human Services, a minimum of 18 credits is required, 12 in RHS, including 6 of which must be at the 400 level.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits
(12 credits in RHS, including 6 which must be at the 400 level)

PRESCRIBED COURSES: (12 credits)
RHS 100 GS;US;IL(3), RHS 301(3), RHS 403(3) (Sem: 4-8)
RHS 410(3)

ADDITIONAL COURSES: (6 credits)
Select 6 credits from Biobehavioral Health (BBH), Communication Sciences and Disorders (CSD), Criminal Justice (CRIMJ), Disability Studies (DBLTY), Education Theory and Policy (EDTHP), Global and International Studies (GLIS), Health Policy and Administration (HPA), Human Development and Family Studies (HDFS), Kinesiology (KINES), Labor and Employment Relations (LER), Nursing (NURS), Psychology (PSYCH), Sociology (SOC), Special Education (SPLED), and Workforce Education and Development (WFED).

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-03-040

Review Date: 11/15/2016

Religious Studies Minor

Abington - contact: C. Pierce Salguero, cps14@psu.edu
University Park, College of the Liberal Arts (RL ST)

The minor in Religious Studies requires 18 hours of course work in RL ST. It (1) acquaints the student with the methods for studying religion (how one studies a religion), (2) provides an elementary introduction to the world's main religious traditions (names, dates, ideas, similarities and differences), and (3) offers the opportunity to investigate a particular topic or religion in greater detail. Students are required to take one survey course (either RL ST 1, RL ST 3, or RL ST 4), which provides a broad historical overview of several religions, from their foundation to the present day.

The interaction between religions and their cultural contexts is emphasized, as is the evolution of an individual religion. After this introduction, the student is free to choose from a broad array of courses on the psychological, sociological, historical, and textual aspects of religions, both living and dead, both familiar and foreign. For example, a student may study Hinduism, Islam, Christianity, Norse religion, Greco-Roman religion, or the sociological aspects of religions. Reading skills and critical thinking skills are important and will be further developed in the courses.

The minor is excellent preparation for a career in the professions (law, medicine), and many students use this classical humanities topic to augment a major in the pure sciences.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (3 credits)

Select 3 credits from RL ST 1 GH;US;IL(3), RL ST 3 GH;US;IL(3), or RL ST 4 GH;US;IL(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits (at least 6 credits at the 400-level) in Religious Studies (Sem: 3-8)

Last Revised by the Department: Summer Session 1995

Blue Sheet Item #: 23-06-147

Review Date: 3/11/03

LA

Recreation, Park, and Tourism Management Minor

University Park, College of Health and Human Development (RPTM)

Contact: Deb Houser, dmh44@psu.edu, 814-863-8989

The minor in Recreation, Park, and Tourism Management provides an introduction to recreation/leisure services, and emphasizes professional skills essential for successful delivery of these services. Examples of settings offering recreation/leisure services include resorts, theme parks, convention centers, sports and fitness facilities, private corporations, nonprofit agencies, governmental agencies (municipal, state, and federal levels), armed services, colleges and universities, correctional facilities, camps, public parks, nature centers, hospitals and other health care agencies.

Students who minor in Recreation, Park, and Tourism Management gain knowledge and competencies in recreation leadership, program development and implementation, and administration of recreation services. In addition, students explore the relevance of recreation and leisure in their own lives. Support courses enable the student to focus on specialized services, such as commercial recreation and tourism, community recreation, park management, environmental interpretation, or therapeutic recreation.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 20 credits

PRESCRIBED COURSES (14 credits)

RPTM 101(2), RPTM 120 GS(3) (Sem: 1-4)

RPTM 236(3), RPTM 456(3), RPTM 410(3) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits three of which must be from 400-level RPTM courses (Sem: 5-8)

Last Revised by the Department: Fall Semester 2004

Blue Sheet Item #: 32-06-123A

Review Date: 02/25/05

HH

**PROGRAM CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS**
Begin Date of Enrollment Hold: July 10, 2013

Russian Translation Minor

University Park, College of the Liberal Arts (RUS T)

The Russian Translation minor is designed to offer, within the context of a liberal education, specialized skills in technical translation from the Russian language. The curriculum is career-oriented and requires competence in a technical field or fields in addition to the language skill. The student will select such a field or fields in accordance with his or her special interests and in consultation both with an adviser and with persons directly involved with the field chosen.

The Department of Germanic and Slavic Languages and Literatures offers an array of courses in Russian language, literature, and culture. Study abroad in Russia at St. Petersburg University under the University's study abroad program is available. For the Russian Translation minor, students must take RUS 400, RUS 412, and an additional 12 credits of Russian, 3 at the 400 level and 9 at the 200 level or higher, for a total of 18 credits.

The Russian Translation minor opens employment opportunities for its graduates in fields and professions where proficiency in one or more foreign languages is desirable or required.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)
RUS 400 IL(3), RUS 412 IL(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 9 credits of Russian courses at the 200 level or higher (Sem: 5-8)
Select 3 credits of 400-level Russian courses (Sem: 5-8)

Last Revised by the Department: Summer Session 2002

Blue Sheet Item #: 30-01-037

Review Date: 08/28/01

LA

Russian Minor

University Park, College of the Liberal Arts (RUS)

The Russian minor is designed for students who want to study the language, literature, and culture of Russia. Russian is spoken through the former Soviet Union and widely understood in the countries of Eastern Europe. The Department of Germanic and Slavic Languages and Literatures offers an array of courses in Russian language, literature, and culture. Study abroad in Russia at St. Petersburg University under the University's study abroad program is available. For the Russian minor, students must accumulate 18 credits (9 of them at the 400 level) in Russian. The Russian minor leads to various employment opportunities. Recipients of the Russian minor have found employment with businesses having contact with the former Soviet Union, with various agencies of the U.S. government, in the educational, journalistic and publishing fields, and in the travel industry.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

PRESCRIBED COURSES (7 credits)

RUS 100 GH;IL(3), RUS 200 IL(4)

ADDITIONAL COURSES (3 credits)

RUS 141W IL(3), RUS 142Y IL(3), RUS 143 GH;IL(3)

SUPPORTING COURSES (9 credits)

Select 9 credits from RUS 400 IL(3), RUS 401(3), RUS 402(3), RUS 403(3), RUS 404(3), RUS 405(3), RUS 406(3), RUS 412(3), RUS 460(3)

Last Revised by the Department: Spring Semester 2016

Blue Sheet Item #: 44-06-048

Review Date: 4/5/16

LA

Russian Area Studies Minor

University Park, College of the Liberal Arts (RUSSA)

The Russian Area Studies minor is an interdisciplinary program supervised by the Center for Russian and East European Studies and the Department of Slavic and East European Languages designed to combine a regional specialization with an academic disciplinary major. The minor may be combined with any undergraduate major in the University. It requires 15 credits in approved Area Studies courses (6 must be at the 400 level or above), 12 credits in beginning Russian language or the equivalent, and 6 credits of Russian language at the 200 level or above, as well as the baccalaureate degree and departmental major requirements of the student's choice.

The minor helps prepare students for further academic work in the Russian area at the graduate level or to pursue careers as area specialists in commerce, industry, journalism, education, and various governmental and international agencies.

Only courses in which the student earns a grade of C or better may be counted toward fulfillment of the requirements of the minor. The Center for Russian and East European Studies awards a certificate in Russian Area Studies to students successfully completing all the requirements of the program.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21-33 credits

ADDITIONAL COURSES (15-27 credits)

RUS 1(4), RUS 2(4), RUS 3(4) (Sem: 1-6)

Select 6-9 credits in humanities from HIST 142 GS;IL(3), HIST 434 IL(3), RUS 141W IL(3), or RUS 142Y IL(3) (Sem: 1-8)

Select 6-9 credits in the social sciences from ECON 472 GS(3), PLSC 413(3), or PLSC 452(3) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of RUS 200-level courses or above (Sem: 3-8)

Last Revised by the Department: Fall Semester 1993

Blue Sheet Item #: 21-05-022

Review Date: 10/11/04

UCA Revision #2: 7/30/07

LA

**PROGRAM CURRENTLY ON HOLD;
NOT ACCEPTING NEW STUDENTS**
Begin Date of Enrollment Hold: March 24, 2011

Science, Technology, and Society Minor

Intercollege Program (S T S)

This interdisciplinary minor, administered jointly by the College of Engineering and the College of the Liberal Arts, is designed for students in every curriculum at the University. The S T S courses help students integrate their other courses within the framework of the relationships of science, technology, and society. This minor enables students to examine critically the impact of scientific investigation and technological development on society's values, priorities, and institutions, and alternatively the influence human needs have upon scientific and technological activities.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits

PRESCRIBED COURSE (3-6 credits)

S T S 496(3-6) (Sem: 5-8)

SUPPORTING COURSES AND RELATED AREAS (15-18 credits)

Select 9-12 credits from S T S courses (at least 6 credits must be at the 400 level) (Sem: 1-8)

Select 6 credits in consultation with an adviser. These courses may be courses that are also used to fulfill either major or college requirements. (Sem: 1-8)

Last Revised by the Department: Summer Session 1986

Review Date: 6/20/07

EN/LA

Supply Chain and Information Sciences and Technology Minor

University Park: Smeal College of Business and College of Information Sciences and Technology (SCIST)

The minor in SCIST is structured to provide students not majoring in Supply Chain & Information Systems (SC&IS) or Management Information Systems (M I S) with the opportunity to develop working knowledge of information technology, supply chain management, and their interdisciplinary synergies. The joint minor is designed for professional careers in business, information systems, software development, consulting, and government. The successful minor must, at a minimum, possess basic knowledge of quantitative techniques, computer applications, and microeconomics.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

IST 110 GS(3), IST 210(3), IST 220(3) (Sem 1-7)

SCM 301(3) (Sem: 5-6)

ADDITIONAL COURSES (6 credits)

Select 6 credits from SCM 404(3), SCM 405(3), SCM 406(3) (Sem: 6-8)

Last Revised by the Department: Fall Semester 2014

Blue Sheet Item #: 43-03-093

Review Date: 11/18/2014

UCA Revision #1: 8/14/06

BA/IS

Service Enterprise Engineering Minor

University Park, College of Engineering (SEENG_UMNR)

Service sector represents over 80% of the economy and represents over 70% of jobs in the U.S. Service enterprises constitute a wide range in terms of labor intensity, information intensity, and prevailing productivity. Examples of service enterprises include hospitals, retailers, banks, financial institutions, and airlines. This minor is designed for students interested in learning about applying industrial engineering techniques to service enterprises. Students completing this minor will gain an understanding of applying industrial engineering and operations research tools for modeling, analysis, design and control of service enterprises.

In addition to the stated courses for the minor, students in IE pursuing this minor may require HPA 301 or HDFS 129. Students in HPA, HDFS and any other major will require MATH 220 as a prerequisite for IE 405. IE 405 and IE 322 (or an equivalent course in probability and statistics) are prerequisites for IE 460.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

IE 460(3), IE 478(3)

ADDITIONAL COURSES (12 credits)

Select 6 credits from Engineering Cluster (Sem: 5-8)

IE 302(3), IE 322(3), IE 323(3), IE 330(3), IE 402(3), IE 405(3) or MATH 484(3), IE 424(3), IE 467(3), IE 468(3), IE 480 WAC(3)

Select 6 credits from the Service Cluster (Sem: 5-8)

HPA 332(3), HPA 433(3), HPA 442(3), HPA 475(3), HDFS 311(3), HDFS 455(3)

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-038

Review Date: 8/22/2017

Sexuality and Gender Studies Minor

University Park, College of the Liberal Arts (SGS)

The minor in Sexuality and Gender Studies addresses human sexuality and gender as they have been conceptualized and investigated by diverse disciplines: humanities (including history and cultural studies), behavioral and social sciences, biological sciences, and visual and performance arts. Courses in the minor require students to explore scholarship and research on sexuality, sexual orientation, and gender across the lifespan, across cultures, and throughout history. Developing students' critical skills in a variety of disciplines, courses in the minor cover theories of sexuality and gender; sexual orientation; lesbian, gay, bisexual, and transgender movements; the history of sexual norms; queer theory; gender identity; and impact of gender identities and erotic orientations on the arts; etc.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (6 credits)

ENGL 245 GH;US(3) and HDFS/WMNST 250 US(3) (Sem: 1-4)

ADDITIONAL COURSES (12 credits)

In order to fulfill the interdisciplinary nature of the minor, students must study both in arts and humanities and in sciences. Students are required to complete a total of at least 12 credits from the two categories below: a minimum of 3 credits from humanities and the arts and a minimum of 3 credits from the sciences. Completion of the minor also requires at least 6 credits at the 400 level in either humanities and the arts or in the sciences (Sem: 1-8). With the permission of the person in charge of the minor, "Special Topics" courses may be substituted for courses listed below.

A. Sexuality studies in humanities and the arts:

CHNS 416 IL(3), ENGL 225 GA;GH(3), ENGL 227 GH;US;IL(3), HIST/WMNST 116 GS;US;IL(3), HIST/WMNST 166 GH;US(3), HIST/WMNST 466 US;IL(3), PHIL 14 GH;US(3), WMNST 106N GS;US;IL(3), WMNST 301 GH;US;IL(3), WMNST 400 US;IL(3) (Sem: 1-8)

B. Sexuality studies in the sciences:

AFAM/SOC/WMNST 103 US(3), AFAM/WMNST 364 GS;US(3), ANTH 216 GN;GS(3), ANTH 416(3), ANTH/WMNST 476(3), BBH 146 GHA(3), BBH 251 US(3), BBH 315 US(3), BBH 446(3), BIOL 177 GN(3), GEOG/WMNST 426Y US;IL(3), HDFS 405 US(3), PSYCH 231 GS;US(3), PSYCH 422(3), PSYCH 479/WMNST 471 US(3), OR SOC/WMNST 110 GS;US(3) (Sem: 1-8)

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

LA

Six Sigma Minor

University Park, College of Engineering (SIGMA)

Six Sigma has been increasingly internalized by companies involved in manufacturing, health care, and service industries. The Six Sigma process has also been used to address environmental concerns such as water quality and energy conservation. Thus, this minor is designed for students who are interested in the Six Sigma statistical methodology for increasing productivity and enhancing quality. The minor will provide students with an understanding of how business models are changing in response to globalization and how the Six Sigma process and product improvement methodology is thus a vehicle for industry prosperity in this climate. Students completing the minor will develop their analytical and statistical skills, and gain a competitive advantage in the work place.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (18 credits)

IE 305 (3), IE 322 (3), IE 323 (3) (Sem: 5-6)

IE 433 (3), IE 434 (3), IE 436 (3) (Sem: 7-8)

Last Revised by the Department: Summer Session 2009

Blue Sheet Item #: 37-06-042

Review Date: 4/14/09

EN

Sociology Minor (SOC)

Contact: Abington College, Michael Bernstein, mib70@psu.edu; Altoona College, Karyn McKinney, kdm12@psu.edu; Behrend College, Nicole Shoenberger, nas25@psu.edu; Capital College, Kenneth Cunningham, kuc1@psu.edu; Penn State Fayette, Russ Filburn, frf1@psu.edu; Penn State Schuylkill, Salih Hakan Can, shc11@psu.edu; College of the Liberal Arts, Sal Oropesa, rso1@psu.edu

The sociology minor allows students to explore the wide range of topics, social groups, and social interactions studied by sociologists. From social inequalities and social problems to the familiar institutions of family, school, religion, and government, the diversity of courses available allows sociology minors to explore courses relevant to their interests. The courses also provide multiple viewpoints, studying the intimate interactions of families and small groups and the complex interactions of global economies and political alliances. Requiring a minimum of 18 credits in sociology, including Introductory Sociology (SOC 1) and two courses at the 400 level, students have flexibility in choosing a set of courses for their sociology minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

SOC 1 GS(3) (Sem: 1-6)

SUPPORTING COURSES AND RELATED AREAS (15 credits)

Select 15 credits in sociology; at least 6 of those credits must be at the 400 level (Sem: 1-8)

Last Revised by the Department: Fall Semester 2001

Editorial: 3/23/07

Spanish Minor (SPAN)

Contact: Altoona College, Roselyn Costantino, rx19@psu.edu; Behrend College, Soledad Traverso, sxt19@psu.edu; Berks College, Rosario Torres, rzt1@psu.edu; College of the Liberal Arts, Margaret (Peggy) Blue, mmb21@psu.edu

A grade of C or better is required for all courses in the minor. Courses that do not require knowledge of Spanish may not be counted toward the minor.

Scheduling recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (9 credits)

Select 3 credits from: SPAN 100*(3); SPAN 100A(3); SPAN 100B(3); SPAN 100C(3) (Sem: 2-6)

Select 3 credits from: SPAN 200*(3); SPAN 301(3) (Sem: 2-6)

Select 3 credits from: SPAN 215(3) or SPAN 253(3) (Sem: 3-6)

SUPPORTING COURSES AND RELATED AREAS (9 credits)

Select 3 credits from the following: SPAN 210(3), SPAN 220(3), SPAN 297(3), SPAN 299 IL(3), SPAN 300*(3), SPAN 305(3), SPAN 314(3), SPAN 316(3), SPAN 353(3), SPAN 354(3), SPAN 355(3), SPAN 356(3), SPAN 397(3), SPAN 399 IL(3) (Sem: 2-8)

Select 6 credits from the following: SPAN 410*(3), SPAN 412(3), SPAN 413(3), SPAN 418(3), SPAN 420(3), SPAN 439(3), SPAN 472(3), SPAN 474(3), SPAN 476(3), SPAN 479(3), SPAN 488(3), SPAN 490(3), SPAN 497(3), SPAN 499 IL(1-12) (Sem: 5-8)

SPAN 199, 299, 399, and 499 (Study Abroad - Spanish) and SPAN 197, 297, 397, 497 (Special Topics Courses) may also be applied to the Spanish minor and will be substituted for the appropriate course by the Spanish minor advisor. All courses taken abroad must be taught in Spanish.

NOTE: SPAN 130, 131, 230, 231 and any course that does not require a knowledge of Spanish. DO NOT count toward the Spanish minor.

* Heritage speakers (students with Spanish language in family background) and native speakers of Spanish should take SPAN 100A and SPAN 301 instead of SPAN 100 and SPAN 200. May not take SPAN 410.

Last Revised by the Department: Spring Semester 2018

Blue Sheet Item #: 46-05-039

Review Date: 2/20/2018

LA

Special Education Minor

*Penn State Berks - Carole Roberts, ckr10@psu.edu
University Park, College of Education (SPLED)*

PROFESSOR Pual Riccomini, *Program Coordinator*
PROFESSOR Paul Riccomini, *in charge of major*
PROFESSOR David McNaughton, *in charge of minor*

This minor provides undergraduate students with the opportunity for concentrated work in instructional practices to support the achievement of students with special education needs in general education classrooms. Students will learn strategies for creating a positive classroom environment that will promote student growth and achievement, effective instructional practices for students with special education needs, and techniques for assessing the academic progress of students. The targeted instructional practices have been demonstrated to be effective both with students with and those without special education needs.

The minor in Special Education responds to the growing need to provide appropriate instructional services to students with special education needs in general education classrooms.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 24 credits

PRESCRIBED COURSES (12 credits)

EDPSY 14(3) (Sem: 1-4)

SPLED 400(4), SPLED 419(2), SPLED 461(3) (Sem: 5-8)

ADDITIONAL COURSES (12 credits)

EDPSY 10 GS(3), HDFS 229 GS(3) or HDFS 239 GS(3) (Sem: 1-4)

SPLED 403A(3) or SPLED 403B(3) (Sem: 5-8)

Select 6 credits from CSD 146 US;IL(3), CSD 218(3), CSD 269 GS;US;IL(3), CSD 300 US;IL(3), RHS 100 GS;US;IL(3), RHS 402(3), or RPTM 277 US(3) (Sem: 5-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 41-05-084

Review Date: 02/19/2013

ED

Security and Risk Analysis Minor

Penn State Abington - contact: Joe Oakes, jxo19@psu.edu

Penn State Berks

University College: Penn State Beaver, Penn State Mont Alto, Penn State New Kensington, Penn State Worthington Scranton, Galen Grimes, gag5@psu.edu, World Campus

University Park, College of Information Sciences and Technology (SRA)

The minor in Security and Risk Analysis (SRA) is intended to familiarize students with the general frameworks and multidisciplinary theories that define security and related risk analysis. Course work will engage students in the challenges and problems of assuring information confidentiality and integrity (e.g., social, economic, technology, and policy issues) as well as the strengths and weaknesses of various methods for assessing and mitigating associated risk in the students' major field.

The minor provides a grounding in analysis and modeling used in information search, visualization and creative problem solving. This knowledge is set in the context of legal, ethical and regulatory issues of security including analysis of privacy and security law, internal control standards, regulatory policies and basic investigative processes and principles. Such understanding overviews the information technology that plays a critical role in identifying, preventing and responding to security-related events in the student's major field.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 21 credits [\[1\]](#)

(At least 6 credits must be at the 400 level.)

PRESCRIBED COURSES (9 credits)

SRA 111 GS(3), SRA 211(3), SRA 221(3) (Sem: 1-6)

ADDITIONAL COURSES (12 credits)

Select 3 credits from: IST 140(3); CMPSC 101 GQ(3) (Sem: 1-6)

Select 3 credits from: IST 220(3); SRA 231(3) (Sem: 1-6)

Select 6 credits from: IST 432(3), IST 451(3), IST 452(3), IST 453(3), IST 454(3), IST 456(3), SRA 421(3), SRA 468(3), SRA 471(3), SRA 480(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2017

Blue Sheet Item #: 45-06-038

Review Date: 4/4/17

IS

Statistics Minor

Penn State Erie, The Behrend College (STABD)

Contact(s): Michael Rutter, mar36@psu.edu

The minor in Statistics (STABD) provides students with a strong statistical background for careers in biology, actuarial science, engineering, mathematics; or for graduate studies in many fields. The minor is designed to make students proficient in the collection, interpretation and analysis of data.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 28-30 credits

PRESCRIBED COURSES (20 credits)

MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-2)

STAT 301 GQ(3), STAT 401(3), STAT 461(3), STAT 462(3) (Sem: 3-8)

ADDITIONAL COURSES (2-4 credits)

Select 2-4 credits from MATH 230(4) or MATH 231(2) (Sem: 3-4)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of 400-level STAT or related MATH courses (Sem: 5-8)

(No more than three credits from 495 courses can be used to satisfy this requirement.)

Last Revised by the Department: Fall Semester 2008

Blue Sheet Item #: 36-07-004

Review Date: 6/17/08

UCA Revision #2: 7/30/07

BD

Statistics Minor

University Park, Eberly College of Science (STAT)

Contact: David Hunter, drh20@psu.edu, Department Head Statistics

The Statistics minor introduces students to the quantitative aspects of research. Understanding statistics is useful for research in many areas including agriculture, business, education, social science and sciences as well as many jobs in industry and government.

Some course may require other course work as some courses have prerequisites.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 24 -26 credits

PRESCRIBED COURSES (8 credits)

MATH 140 GQ(4), MATH 141 GQ(4) (Sem: 1-2)

ADDITIONAL COURSES (16-18 credits)

Select 6 credits from STAT 301(3); STAT 318(3); STAT 319(3); STAT 401(3); STAT 414(3); STAT 415(3) (Sem: 3-8)

Select 10-12 credits from 400-level STAT courses, not including STAT 401, STAT 414, STAT 415, or STAT 418. (Sem: 5-8)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-137

Review Date: 8/23/2016

SC

Sustainability Leadership

Intercollege Program (SUSLD)

University College, Karen Kackley-Dutt, kek18@psu.edu

The Intercollege Minor in Sustainability Leadership has been designed for students who wish to promote environmental, social, and economic sustainability in their personal and professional lives. Administered by a University-wide faculty committee, the program provides an opportunity for students in any academic major to develop key competencies that will be the foundation for their growth as sustainability leaders in their civic and professional endeavors. Students cultivate these sustainability leadership competencies in the context of thematic tracks that allow them to focus on particular topics within sustainability studies. The competencies cut across all thematic tracks so that all students in the minor will develop capabilities in: systems thinking; application of sustainability concepts, metrics and analysis; ethics; self-knowledge and leadership; change agency; and collaboration. While these competencies are developed in the context of a specific thematic track, they are transferrable to numerous settings and problems, and graduates of the Sustainability Leadership program will be able to apply them to ethical, social, business and civic issues that they encounter after leaving the University.

All students in the minor are required to take the introductory course, Foundations of Leadership in Sustainability (SUST 200). Within each thematic track, students select twelve credits related to the chosen theme in sustainability leadership. These must include three credits of approved leadership coursework (scholarly explorations of leadership concepts related to the chosen theme) and three credits that offer an immersive experience in sustainability (that is, an opportunity to engage, observe and learn in depth about sustainability challenges and solutions related to the student's chosen theme). The final three credits for each student in the minor is the 400-level Sustainability Leadership Capstone experience. Capstone selection is in consultation with the student's major advisor, the minor advisor or coordinator, and the course instructor. The capstone coursework must be relevant to the chosen theme, must have an approved capstone project that includes scholarly applied or theoretical research on a current issue in sustainability leadership, and must include a critical synthesis of the student's minor curriculum and an articulation of its crosscutting themes.

Design for Sustainable Communities Track

This track allows students to investigate sustainability and leadership in community and urban planning; courses focus on both technical design and community development.

Educating for Sustainability Track

This track provides students with the opportunity to explore a variety of approaches to sustainability education and leadership in sustainability.

Humanistic Understanding of Sustainability Track

Through reading and analysis of significant sustainability-focused texts in philosophy, history, literature, and the social sciences students delve into the evolution and history of thinking on sustainability and leadership in sustainability.

Sustainability and Food Systems Track

Students in this track learn about the nature of food and sustainable food systems, and about sustainability policy and leadership issues related to food, including food security, sustainable production practices, distribution, and safety.

Applicants to the minor present a proposed plan of study for the chosen minor track. The proposed plan of study must be approved by the student's major faculty advisor and by the minor advisor. Entrants to the minor are required to have declared a major field of study.

New Sustainability Leadership minor tracks will be developed over time, and students are encouraged to consult with the minor coordinator early in their program planning, in order to be aware of upcoming additions to the curriculum. In exceptional cases, and by written approval of the program coordinator and major advisor, students may propose a specialized track of their own design.

Students may apply toward the minor no more than six credits from their major requirements and no more than six credits from their other minor requirements. The Sustainability Leadership Capstone credits may not be used simultaneously to fulfill capstone or thesis requirements for any other degree program. All minor programs must include at least six credits at the 400 level. A grade of C or higher is required for all courses in the minor.

REQUIREMENTS FOR THE MINOR: 18 credits [1]

PRESCRIBED COURSES (3 credits)

SUST 200(3) (Sem: 2-6)

ADDITIONAL COURSES (6 credits)

Take the following 6 credits, or approved substitutions, in consultation with the minor advisor:

SUST 295 or 495, or approved substitution that provides an immersive sustainability experience (3) (Sem: 5-7)

SUST 496 or approved substitution that offers a capstone project in sustainability leadership (3) (Sem: 7-8)

SUPPORTING AND RELATED COURSE AREA (9 credits)

Allowable courses in this area vary by Sustainability Leadership Thematic Track. See Specifics below.

At least three credits from the Additional Courses or the Supporting Courses must be from outside the student's major department.

Requirements for Sustainability Leadership Minor Thematic Tracks

Design for Sustainable Communities Track

(Allowable courses in this area vary by Sustainability Leadership Thematic Track. See specifics below.)

Select 6 credits from the following course list, or approved substitutions (6 credits)

CE 410 Sustainable Residential Subdivision (3)

CED 152 Community Development Concepts and Practice (3)

CED 309 Land Use Dynamics (3)

CED 409 Land Use Planning and Procedure (3)

CED 427 Society and Natural Resource (3)

ENVE 460 Environmental Law (3)

GEOG 320 (GS;US;IL) Urban Geography: A Global Perspective (3)

GEOG 429 (US;IL) Geographic Perspectives on Global Urbanization (3)

GEOG 436 Ecology, Economy, and Society (3)

GEOG 439 Property and the Global Environment (3)

LARCH 65 (GA;US;IL) Built Environment and Culture (3)

LARCH 145 Ecological Principles for Landscape (3)

LARCH 216 Design and Theory III: Regional Planning and Landscape Systems (4)

SOILS 422 Natural Resources Conservation and Community Sustainability (3)

Select one of the following leadership courses or approved substitutions, in consultation with the SUSLD advisor (3 credits)

AEE 465 Leadership Practices: Power, Influences, and Impact (3)

ARCH 412 Integrative Energy and Environmental Design (3)

CED 375 Community, Local Knowledge, and Democracy (3)

CEDEV 452 Community Structure, Processes and Capacity (3)

Educating for Sustainability Track

Select 6 credits from the following course list, or approved substitutions (6 credits):

AEE 350 Teaching Methods for Agricultural and Environmental Laboratories (3)

AEE 400 Global Agriculture Education (3)
 AEE 412 Methods of Teaching Agriculture and Environmental Science (4)
 AEE 450 Program Design and Delivery (3)
 EDTHP 435 Child Labor and Education in the Global Economy (3)
 EDTHP 440 (CIED 440) Introduction to Philosophy of Education (3)
 RPTM 325 Principles of Environmental Interpretation (3)
 RPTM 430 Environmental Education Methods and Materials (3)

Select 3 credits from the following leadership courses, or approved substitution, in consultation with the SUSLD advisor (3 credits)

AEE 201 (GS) Interpersonal Skills for Tomorrow's Leaders (3)
 AEE 311 Developing Youth Leadership through Organization and Program Structure (3)
 AEE 360 Leadership Development for Small Groups (3)
 AEE 460 Foundations in Leadership Development (3)
 AEE 465 Leadership Practices: Power, Influences, and Impact (3)
 EDLDR 409 Leadership Studies in Popular Film (3)
 EDLDR 480 Introduction to Educational Leadership (3)
 PHIL 119 (GH) Ethical Leadership (3)
 RPTM 236 Leadership and Group Dynamics in Recreation Services (3)
 SOC 469 Techniques in Small Group Facilitation (1-4)

Humanistic Understanding of Sustainability Track

Select 6 credits from the following courses, or approved substitutions (6 credits):

CMLIT 435 (IL) Cultures of Globalization (3)
 CMLIT 455 (IL) Ethics, Justice, and Rights in World Literature (3)
 ENGL 180 (GH) Literature and the Natural World (3)
 ENGL 181A (GH;US) Adventure Literature: Exploring the Chesapeake Bay (4.5)
 ENGL 181B (GH;US) Adventure Literature: Exploring Cape Cod (4.5)
 ENGL 181C (GH;US) The Beach: Exploring the Literature of the Atlantic Shore (4.5)
 ENGL 181D (GH;US) Adventure Literature: Exploring the Literature of American Wilderness (3)
 ENGL 424 Creative Writing and the Natural World (3)
 ENGL 430 American Renaissance (3)
 HIST 112 (GH;US) Introduction to U.S. Environmental History (3)
 HIST 110 (GH;IL) Nature and History (3)
 HIST 111 (GH;US) American Food System: History, Technology, and Culture (3)
 HIST 151 (GS;US) (STS 151) Technology and Society in American History (3)
 HIST 453 American Environmental History (3)
 PHIL 13 (GH) Philosophy, Nature, and the Environment (3)
 PHIL 118 (GH) Introduction to Environmental Philosophy (3)
 PHIL 403 Environmental Ethics (3)

Select 3 credits from the following leadership courses, or approved substitution, in consultation with the SUSLD advisor (3 credits)

CAS 404 Conflict Resolution and Negotiation (3)
 CAS 409 (PL SC 409) Democratic Deliberation (3)
 PHIL 119 (GH) Ethical Leadership (3)
 PLSC 112 (GS) Ethics in Citizenship, Politics, and Government (3)
 PUBPL 305 Leadership Studies (3)

Sustainability and Food Systems Track

Select one of the following food/nutrition courses, or approved substitutions (3 credits):

NUTR 251 (GHA) Introductory Principles of Nutrition (3)
 FDSC 406 Physiology of Nutrition (3)

Select one of the following food system courses, or approved substitutions (3 credits):

AGBM 102 Economics of Food Systems (3)
 AGECE 134 (GN) (R SOC 134) Sustainable Agriculture Science and Policy (3)
 AGECE 144 (GN) Principles and Practices of Organic Agriculture (3)
 ERM 210 (GN) Environmental Factors and Their Effect on Your Food Supply (3)
 HIST 111 (GH; US) (NUTR 111) American Food System: History, Technology, and Culture (3)
 NUTR 430 Global Food Strategies: Problems and Prospects for Reducing World Hunger (3)

Select 3 credits from the following leadership courses, or approved substitution, in consultation with the SUSLD advisor (3 credits)

AEE 201 (GS) Interpersonal Skills for Tomorrow's Leaders (3)
 AEE 465 Leadership Practices: Power, Influences, and Impact (3)
 PHIL 119 (GH) Ethical Leadership (3)
 PLSC 112 (GS) Ethics in Citizenship, Politics, and Government (3)
 RPTM 236 Leadership and Group Dynamics in Recreation Services (3)

Last Revised by the Department: Fall Semester 2015

Blue Sheet Item #: 44-02-000

Review Date: 10/13/2015

Technical Sales Minor

Penn State Erie, The Behrend College (TCHSL)

Contact(s): Diane Parente, dhp3@psu.edu

This minor is designed to accommodate undergraduates enrolled in engineering and engineering technology who wish to augment their majors with further studies in industrial or technical sales. This minor is designed for non-business majors. The objective of the minor is to acquaint the technical students of these majors with the issues and methods associated with industrial or technical sales. Relevant studies include principles of management, operations management, supply chain management, marketing, logistics systems, procurement, personal selling or business-to-business marketing, and project management. Students who complete the minor will be positioned for career opportunities as direct sales engineers who play a key role in selection, purchase, installation and maintenance of technical products by selling technology and engineering solutions, or as manufacturing representatives who independently form contracts in exclusive marketing territories for multiple small manufacturers of compatible but not competing technical products.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 19 credits

Students are required to have a technically-oriented major (i.e. engineering, engineering technology, physical sciences, or other major as approved).

PRESCRIBED COURSES: (9 credits)

MGMT 301(3) (Sem: 5)

MKTG 301(3), SCM 301(3) (Sem: 6)

ADDITIONAL COURSES: (10 credits)

SCM 200 GQ(4) or STAT 200 GQ(4) (Sem: 5)

MKTG 410(3) or marketing elective as approved (Sem: 7-8)

Select 3 credits from the following list: MGMT 409(3), MGMT 410(3), SCM 455(3), SCM 460(3) (Sem: 7-8)

Last Reviewed by the Department: Summer Session 2011

Blue Sheet Item #:40-01-039

Review Date: 8/16/2011

UCA Revision #2: 7/30/07

BD

Teaching English to Speakers of Other Languages Minor

*Penn State Abington - contact: Roxanna Senshyn, rms42@psu.edu
University Park, College of the Liberal Arts (TESOL)*

The minor in Teaching English to Speakers of Other Languages (TESOL) provides students, regardless of academic major, with basic professional knowledge and skills in the teaching of English as a second language (ESL) in adult programs in the United States and English-as-a-foreign-language (EFL) in settings abroad. It is also excellent preparation for graduate work in TESOL and Applied Linguistics.

The program of study includes an introduction to the study of language use, culture, and social interaction from a variety of perspectives, to the role of English in globalization processes and to how globalization changes the structure, norms, and usage of English. It also provides students with an overview of current theories and practices in the teaching of English language and culture, and practical experiences in and basic tools for planning, delivering, and evaluating instruction.

Individuals who obtain a minor in TESOL may participate in one of the teaching exchanges sponsored by the Department of Applied Linguistics upon graduation. They may also find teaching positions in private language institutes or as private language tutors in the United States and abroad and well as through organizations such as the Peace Corps and the Fulbright Exchange.

This minor does not duplicate other undergraduate degree programs within the department, college or university. It may be pursued concurrently with any undergraduate major.

The minor consists of 18 credit hours. All students are required to take four three-credit courses, for a total of 12 credits in the study of language use, culture and interaction, English as a global language, functional grammar and teaching methods.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (12 credits)

APLNG 200 GH;IL(3), APLNG 210(3), APLNG 484(3), APLNG 493 IL(3) (Sem: 2-8)

ADDITIONAL COURSES (6 credits)

Select 6 credits from the following:

APLNG 83 GS;US;IL(3), APLNG 410(3), APLNG 412(3), APLNG 482 IL(3), APLNG 491 (3) (Sem 1-8)

Last Revised by the Department: Summer Session 2009

Blue Sheet Item #: 37-03-029

Review Date: 11/18/08

LA

Theatre Minor

Penn State Berks - James Brown, jnb20@psu.edu
Penn State Harrisburg - Maria Enriquez, mse19@psu.edu
University College, Penn State Schuylkill, Penn State York
University Park, College of Arts and Architecture (THEA)

The Theatre minor is designed to be an enhancement to a major area of study and/or personal enrichment. The minor should be particularly attractive to students in the humanities (English), communication (Film, Journalism), and the arts (Music, Architecture). The minor may also be attractive to students who need to demonstrate a wide range of interests.

The Theatre minor requirements total 18 credits. Theatre 100 GA;US;IL, a required course in the minor, is an experiential survey of all aspects of the living theatre, as presented by a resident company of theatre artists. Theatre 410, an advanced script analysis course, is also required. Students choose one course from the approved list of theatre history courses and one course from the approved list of design/technical courses. These supporting courses place the literature and aesthetic in historical, social, and political perspective. Students elect 6 theatre credits as additional courses. Typical supporting courses include: Theatre 102 GA, fundamentals of acting; THEA 208 GA;US;IL, Workshop: Theatre in Diverse Cultures; and advanced design or theatre history classes.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

THEA 410(3) (Sem: 5-8)

ADDITIONAL COURSES (9 credits)

THEA 100 GA;US;IL(3) or THEA 105 GA(3) (Sem: 1-2)

Select 3 credits from THEA 130(3), THEA 131(3), or THEA 150(3) (Sem: 1-4)

Select 3 credits from THEA 401 IL(3), THEA 405 US(3), THEA 408W US(3), THEA 412 US(3), THEA 454(3), THEA 464(3), or THEA 465(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (6 credits)

Select 6 credits of THEA courses (Sem: 3-8)

Last Revised by the Department: Fall Semester 2005

Blue Sheet Item #: 33-04-018

Review Date: 5/2/07

AA

Technical Writing Minor (TEHWR)

Contact: College of the Liberal Arts, Elizabeth Brown, eaf4@psu.edu

The Department of English offers an 18-credit minor leading to a Technical Writing certificate to all students, regardless of major or college, who want to do concentrated work in technical writing.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

ENGL 418(3) (Sem: 5-8)

ADDITIONAL COURSES (12-15 credits)

(Some courses in this category may have prerequisites that are not required in the minor.)

Select 3-6 credits from CAS 452(3), CAS 452W(3), ENGL 470(3), ENGL 471(3), ENGL 472(3), ENGL 473(3), ENGL 474(3), S T S/PHIL 407(3); PHIL/S T S 433(3) (Sem: 3-8)

Select 6-9 credits from ENGL 415(3), ENGL 416(3), ENGL 417(3), ENGL 419(3), ENGL 420(3), ENGL 421(3), ENGL 480(3); ENGL 495(3) (Sem: 3-8)

Select 3-6 credits from ART 002 GA(3); ART 003 GA(3); ART 101 GA(3); GD 100 GA(3); LDT 100 GS;IL(3); INSYS 441(3), PSYCH 444(3), PSYCH 456(3) (Sem: 3-8)

SUPPORTING COURSES AND RELATED AREAS (0-3 credits)

(Some courses in this category may have prerequisites that are not required in the minor.)

Last Revised by the Department: Fall Semester 2016

Blue Sheet Item #: 45-01-114

Review Date: 8/23/16

UCA Revision #1: 9/1/06

LA

Wildlife and Fisheries Science Minor

University Park, College of Agricultural Sciences (W F S)

The Wildlife and Fisheries Science minor provides non-majors with an introduction to the principles and practices of wildlife and fisheries conservation, research, and management. Although the minor includes both wildlife and fisheries course offerings, courses may be selected to provide a focus in one area or the other.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 22 credits

PRESCRIBED COURSES (10 credits) [\[1\]](#)

BIOL 110 GN(4), WFS 209(3), WFS 430(3) (Sem: 5-6)

ADDITIONAL COURSES (12 credits) [\[1\]](#)

Select 12 credits from WFS 300(2), WFS 407(3), WFS 408(3), WFS 410(3), WFS 422(3), WFS/ERM 435(3), WFS 440(3), WFS 447(3), WFS 450(3), WFS 452(2), WFS 460(3), WFS 462(3), WFS 463(3) (Sem: 5-8)

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Spring Semester 2015

Blue Sheet Item #: 43-06-000

Review Date: 04/14/2015

AG

World Literature Minor

University Park, College of the Liberal Arts (W LIT)

The minor in World Literature enables students to create a package of literature courses tailored to their interests. It offers an international approach to the study of literatures and cultures around the globe. A Senior Seminar is the culminating course. Education abroad can be included in this minor.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

CMLIT 400 IL(3) (Sem: 5-8)

ADDITIONAL COURSES (3 credits)

CMLIT 10 GH;IL(3) or CMLIT 100 GH;IL(3) (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits in Comparative Literature (at least 3 of these credits at the 400 level), unified by topic, theme, period, or a similar principle, subject to approval of a faculty adviser (Sem:1-8)

Last Revised by the Department: Summer Session 2010

Blue Sheet Item #: 38-04-043

Review Date: 01/12/2010

LA

Watersheds & Water Resources Minor

University Park, College of Earth and Mineral Sciences (W W R)

Watersheds are important landscape features that control the biogeochemistry of natural waters. This interdisciplinary minor enables students to learn the fundamental processes governing the transport and chemical evolution of surface and subsurface waters. It provides a complement to elective and required coursework in earth sciences, resource management, wastewater treatment, and/or environmental planning. Students in this program will learn to apply fundamental concepts of chemistry, biology, geoscience, and landscape evolution to processes operating at the watershed scale. Learning objectives for the minor include excellence in written and oral expression, the ability to collect and interpret data from dynamic natural systems, and rigor in scientific thought.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

ADDITIONAL COURSES (18 credits)

Select 18 credits from the WWR committee's approved list of courses, which includes but is not limited to courses listed below (at least 6 credits must be taken at the 400 level):

BE 307(3), BE 467(4), PLANT 217(3), ASM 327(3), CE 370(3), CE 371(3), CE 461(3), CE 475(4), CHEM 202(3), CHEM 402(3), ERM 411(3), ERM 435(3), ERM 450(3), ENVE 411(3), ENVE 415(3), ENVSE 408(3), FOR 470(3), FOR 471(1), GEOG 431(3), GEOSC 201(4), GEOSC 340(3), GEOSC 412(3), GEOSC 413(3), GEOSC 419(3), GEOSC 445(4), GEOSC 452(3), SOILS 405(3), SOILS 418(3), WFS 410(3), WFS 422(3) (Sem: 5-8)

Last Revised by the Department: Summer Session 2008

Blue Sheet Item #: 36-04-027

Review Date: 1/15/08

UCA Revision #1: 8/14/06

EM

Women's Studies Minor (WMNST)

Contacts: Abington College, Roy Robson, rrr5237@psu.edu; Altoona College, Le Ann De Reus, lad12@psu.edu; Penn State Behrend College, Dr. Sarah Whitney, sew17@psu.edu; Berks College, Lauren Jade Martin, ljm37@psu.edu; Penn State Brandywine, Phyllis Cole, pbcc2@psu.edu; Penn State DuBois, Jacquelyn Atkins, jka1@psu.edu; Penn State Harrisburg, Katie Robinson, kdr12@psu.edu; Penn State Mont Alto, Alice Royer, axr24@psu.edu; College of the Liberal Arts, Mindy Boffemmyer, mub21@psu.edu; Penn State York, Dr. Deborah Eicher-Catt, dle4@psu.edu

This interdisciplinary minor is designed to develop a broad understanding of the study of women and women's perspectives in all areas of academic scholarship. The primary focus is on feminist analyses of women's lives, women's social, cultural, and scientific contributions, and the structure of sex/gender systems. The interdisciplinary and inclusive nature of the field is reflected in a curriculum that includes courses cross-listed with a wide variety of departments, courses that deal with aspects of women's lives throughout history, and courses that recognize the diversities of culture, race, religion, ethnicity, age, disability, and sexual orientation. The Women's Studies minor emphasizes the development of critical and analytical skills, creative approaches to problem solving, and the ability to articulate productive alternatives.

Women's Studies minors have a definite career advantage, and can be successful in a wide variety of career paths. Some of these include legal advocacy, counseling, journalism, public relations, management, teaching, medicine, politics, or art. In addition, many alumnae/i are currently studying in professional, law, or graduate schools.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES (3 credits)

WMNST 301 GH(3) (Sem: 1-4)

ADDITIONAL COURSES (3 credits)

WMNST 100 GS;US;IL(3) or WMNST 106N GS;US;IL (Sem: 1-4)

SUPPORTING COURSES AND RELATED AREAS (12 credits)

Select 12 credits in Women's Studies or from the program-approved list; at least 6 credits must be at the 400-level

--3 credits from each of the following categories: (Sem: 1-8)

- a. arts or humanities
- b. natural or social sciences
- c. focusing on non-Western women or on women of color in the United States

Last Revised by the Department: Spring Semester 2002

Blue Sheet Item #: 30-02-008A

Review Date: 6/29/05

Writing Minor

Capital College (WRTNG): Penn State Harrisburg
Penn State Abington - contact: Liliana Naydan, lmn122@psu.edu
James Jaap, jaj15@psu.edu

Writing is valued as a mode of learning, as a means of expression, and as a skill highly desirable in the workplace. Personal development, interpersonal communication, and professional marketability may all be enhanced by the further study and practice of writing. For these reasons, the Writing minor offers students from virtually every discipline across the University an opportunity to learn more about a wide variety of writing: informative/persuasive, professional, and creative, while improving their own writing skills through hands-on writing experiences. In addition to offering students opportunities to study and practice different types of writing, the minor affords students the opportunity to write for/in different media, producing both print and electronic texts.

For the Writing minor, a total of 18 credits is required. Students may not count courses used to satisfy General Education Writing/Speaking Skills.

A grade of C or better is required for all courses in the minor.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

REQUIREMENTS FOR THE MINOR: 18 credits

PRESCRIBED COURSES: 6 credits

ENGL 211(3) (Sem: 3-8)

ENGL 420(3) (Sem: 5-8)

ADDITIONAL COURSES: 6-12 credits

At least 3 credits of Additional/Supporting courses must be taken at the 400 level.

Select 6-12 credits from ENGL 50 GA(3), ENGL 209(1-6), ENGL 212(3), ENGL 213(3), ENGL 215(3), ENGL 412(3), ENGL 413(3), ENGL 414(3), ENGL 415(3), ENGL 416(3), ENGL 417(3), ENGL 418(3), ENGL 419(3), ENGL 421(3), ENGL 422(3), ENGL 423(3), ENGL 424(3), ENGL 425(3), ENGL 470(3), ENGL 471(3), ENGL 474(3) (Sem: 3-8)

SUPPORTING COURSES: 0-6 credits

Select 0-6 credits from a department-approved list (Sem: 5-8)

Last Revised by the Department: Spring Semester 2013

Blue Sheet Item #: 42-01-028

Review Date: 08/20/13

Program coordinator updated by Publications: 9/29/06

CL

Certificate Programs

An undergraduate certificate, a formal award showing the satisfactory completion of a postsecondary educational curriculum, is designed primarily for students who are typically beyond the compulsory age for high school.

Certificates are awarded in academic, vocational, and continuing professional education. Penn State does not offer certificates for avocational and adult basic education. Certificates are not certifications. Certifications are awarded by governmental and professional agencies.

Certificates reflect emerging academic areas, necessary professional development requirements, or requirements that do not constitute a degree program. They may be supplements or enhancements to existing degree programs or may be stand-alone. For credit, certificates often provide "step-up" opportunities to degree programs allowing for milestones of progress.

Credit or noncredit certificates are offered. A certificate consists of a group of courses, typically 9-15 credits, developed, supervised, and evaluated by the offering academic unit(s). At least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. In exceptional circumstances, a certificate may have fewer than 9 credits or more than 15 credits, provided adequate justification is given to explain why. Credit courses offered for a certificate require a grade of C or higher. Noncredit courses require satisfactory completion, as defined by the unit offering the certificate.

Requirements for a certificate may be completed at any campus location offering the specified courses for the certificate. All students who enroll in certificates must be defined as Penn State students.

For more information, see policy M-12 at: <http://www.psu.edu/oue/aappm>

11/8/17

PRE-MEDICAL/HEALTHCARE CERTIFICATE

Undergraduate Certificate Program

Nora Shultz
115 Sutherland Bldg
Penn State Abington
Phone: 215-881-7877
E-mail: nus19@psu.edu

Abington College

PRE-MEDICAL/HEALTHCARE CERTIFICATE (ABMED)

Designed for those who have a Baccalaureate degree in a non-science major and decide, post graduation, to apply to medical school. Applicants must have successfully completed two semesters of college calculus before entering. This program concentrates on science course work in biology, chemistry, and physics and can be completed in one year. Each course is offered over 8-weeks with lectures being offered in a hybrid format, meeting face-to-face one night per week with labs being conducted on weekends. This program distinguishes itself from others through the use of 8-week sessions, lectures offered in a hybrid format with in class meetings in the evenings, and labs on Saturdays. Also offered are MCAT preparation and mock interviews.

To earn an undergraduate certificate in PRE-MEDICAL/HEALTHCARE , a minimum of 39 credits is required.

PRESCRIBED COURSES

CHEM 110
BIOL 110
CHEM 111
CHEM 112
BIOL 141
BIOL 142
CHEM 113
CHEM 210
PHYS 250
BIOL 472
CHEM 212
PHYS 251
CHEM 213
BIOL 230W

Prerequisites Required.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 11/07/2011

AB *A

ACTUARIAL MATHEMATICS AND STATISTICS

Undergraduate Certificate Program

Michael Rutter
001 Prishcak Bldg
Penn State Erie
Phone: 814-898-6272
E-mail: mar36@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

ACTUARIAL MATHEMATICS AND STATISTICS (ACSCBC)

DESIGNED TO PREPARE STUDENTS FOR A CAREER AS AN ACTUARY. STUDENTS COMPLETING THE CERTIFICATE ARE PREPARED TO PASS THE P/1 (PROBABILITY), FM/2 (FINANCIAL MATHEMATICS) EXAMINATIONS AND WOULD OBTAIN VEE CREDIT FOR ECONOMIC, CORPORATE FINANCE AND APPLIED STATISTICAL METHODS TOPICS ONCE A SECOND ACTUARIAL EXAMINATION IS PASSED. IT IS DIVIDED WITH MATHEMATICAL AND STATISTICAL PREREQUISITES, UPPER-LEVEL STATISTICS, AND FINANCE/ECONOMICS COURSES. REQUIRES 31 CREDIT HOURS AND CAN BE COMPLETED CONCURRENTLY WITH A PENN STATE DEGREE OR VIA CONTINUING EDUCATION

To earn an undergraduate certificate in ACTUARIAL MATHEMATICS AND STATISTICS, a minimum of 31 credits is required.

PRESCRIBED COURSES

MATH 230
STAT 301
STAT 401 OR SCM 200 OR STAT 200
STAT 414
STAT 462
ECON 481 OR ECON 485
ECON 102
ECON 104
FIN 301
FIN 427

Prerequisites Required.

Effective Date: Spring Semester 2010

Expiration Date:

Last Revised by the Department: 11/07/2011

BC SCIAB

ADULT DEVELOPMENT AND AGING SERVICES

Undergraduate Certificate Program

Devon Thomas
119 Health and Human Development
University Park
Phone: 814-863-8000
E-mail: dmc233@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park, World Campus, Penn State York

PROGRAM IN ADULT DEVELOPMENT AND AGING SERVICES (ADAS)

This certificate program is designed as a flexible opportunity for gaining knowledge and professional development for people interested in working with older adults in a variety of community settings. The program has been designed in concert with the Penn State Gerontology Center. The courses are divided into a Professional Core (12 credits) and Professional Electives (3 credits).

To earn an undergraduate certificate in PROGRAM IN ADULT DEVELOPMENT AND AGING SERVICES, a minimum of 15 credits is required.

PRESCRIBED COURSES

BIOL 155
HDFS 249
HPA 101
SOC 35
HDFS 129 OR HDFS 216 OR HDFS 301 OR HDFS 311
OR HDFS 315 OR HDFS 315Y OR NUTR 251
OR PSYCH100
OR SOC 1

Prerequisites Required.

Effective Date: Spring Semester 2006

Expiration Date:

Last Revised by the Department: 11/14/2011

HH HD FS

ADVERTISING

Undergraduate Certificate Program

Rodney Troester
170 Irvin Kochel Center
Penn State Erie
Phone: 814-898-6442
E-mail: rlt5@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

ADVERTISING (ADVERT)

The Certificate in Advertising offered at Penn State Behrend is designed for communication and business majors who wish to focus their supporting or non-business supporting coursework in a specific professional communication area. The certificate is also designed for working professionals interested in developing their skill-set in advertising. The foundation of the certificate is developed in the Media Writing, Introduction to Advertising, and Creative Strategies courses. Students are then allowed to choose one additional advanced course to complete the 12 required hours.

To earn an undergraduate certificate in ADVERTISING, a minimum of 12 credits is required.

PRESCRIBED COURSES

COMM 315
COMM 320
COMM 421W
COMM 422 OR COMM 424

No Prerequisites Required.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 11/10/2011

BC H&SS

Africana Studies

Penn State Greater Allegheny

Mildred R. Mickle
Penn State Greater Allegheny
412-675-9135
mrm33@psu.edu

The 15-credit Africana Studies certificate is intended to provide an interdisciplinary approach to both African and African American studies and to instill students with the type of professional and intellectual flexibility that is of high value in a twenty-first century job market. The certificate could enhance majors such as English, psychology, business, engineering, or communications through adding intercultural and/or global expertise. Students are required to take 9 credits of 200-level (or below) courses and 6 credits of 400-level courses from the approved lists.

Admission Requirements:

Students should complete first the GWS requirement of one of the following (ENGL 15 or ENGL 30), and either HIST 20 or HIST 21.

List of Courses Included in the Certificate:

9 credits from the following list:

AFAM 101
AFAM 103/SOC 103/WMNST 103
AFAM/HIST 210
AFAM/HIST 211
AFAM/HIST 250
AFAM/RLST 146
AFAM/RLST 147
AFAM/THEA 208
AFAM/WMNST 102
AFAM 100
AFR 110
AFR 150
AFR 202
AFR/HIST 191
AFR/HIST 192
CMLIT 3
ENGL 139
ENGL/AFAM 235
INART 62
SOC 119

6 credits from the following list:

AFAM 401
AFAM 410
AFAM/SOC 409
AFAM/THEA 412
AFAM 432
CMLIT 423
CRIMJ 451
ENGL 431
ENGL 461
ENGL 463
ENGL 466
ENGL 467
ENGL 468
ENGL 469
ENGL/WMNST 462
PSYCH 432
SOC 409
SOC 419

Effective Semester: Fall 2013

Agricultural Stewardship and Conservation

Undergraduate Certificate Program

Robert Shannon
119 Ag. Administration Bldg.
University Park, PA 16802
Phone: 814-865-6942
E-mail: rds13@psu.edu

Agricultural Sciences

Agricultural Stewardship and Conservation (AGCNS)

The Chesapeake Bay Program and other local, state, and federal initiatives to protect surface and groundwater resources have increasingly focused on agricultural best management practices. A significant demand has been created for professionals trained in these best management practices and the ability to plan and implement them in a wide variety of agricultural systems. The goal of the certificate program in Agricultural Stewardship and Conservation is to provide enhanced knowledge for planning, designing, and implementing best management practices on agricultural lands that contribute to soil health while preventing soil erosion, controlling runoff and managing nutrient inputs and outputs, all of which serve to protect ground and surface waters. Local, state and federal policies and regulations pertaining to agricultural stewardship are addressed, as well as certification requirements for agricultural and nutrient management specialists to work in the field of agricultural erosion and sediment control and nutrient management in the Commonwealth of Pennsylvania.

REQUIREMENTS FOR THE CERTIFICATE: 11 credits

REQUIRED COURSES (11-14 credits)

SOILS 101(3)
ASM 327(3) or BE 307(3) or SOILS 422(4)
SOILS 418(3)
ERM 426(1)
ERM 495(1-3) or ERM 496(1-3)

ADVANCED INSTRUCTOR DEVELOPMENT FOR PROFESSIONALS

Undergraduate Certificate Program

Mark Threeton
301C Keller Building
University Park, PA 16802
Phone: 814-863-5361
Email: mdt177@psu.edu

University Park

ADVANCED INSTRUCTOR DEVELOPMENT FOR PROFESSIONALS

This certificate is designed for the adult learner who would like to gain knowledge of essential advanced instructor development concepts. These adult learners may already possess a degree in an occupational discipline, but need to augment their knowledge and resumes to advance their careers with their current employer or transition into a new job. Adult learners taking this certificate may also be taking post-secondary credit courses for the first time.

To earn an undergraduate certificate in ADVANCED INSTRUCTOR DEVELOPMENT FOR PROFESSIONALS, a minimum of 9 credits is required.

Admission Requirements:

High school diploma and two years of work experience.

REQUIRED COURSES

WFED 270
WFED 413
WFED 471

Effective Semester: Fall 2013

ADVANCED CRIMINAL JUSTICE

Undergraduate Certificate Program

Mary Ann Probst
103 Cypress Bldg
Penn State Altoona
Phone: 814-949-5352
Email: map141@psu.edu

Altoona College, University Park

ADVANCED CRIMINAL JUSTICE (ALACJ)

A continuation of the Criminal Justice (ALBCJ) certificate. Certificate includes six required credits (MIS 103 & SOC 119) and six additional credits (select CRIMJ 210 and CRIMJ 220 or CRIMJ 230). For the additional credits, student must select the two courses not used for the ALBCJ certificate.

To earn an undergraduate certificate in ADVANCED CRIMINAL JUSTICE, a minimum of 12 credits is required.

PRESCRIBED COURSES

MIS 103
SOC 119
OR CRIMJ 210 OR CRIMJ 220 OR CRIMJ 230

No Prerequisites Required.

Effective Date: Spring Semester 1996

Expiration Date:

Last Revised by the Department: 11/07/2011

AL ALEHS

ADVANCED BUSINESS

Undergraduate Certificate Program

Deborah Hommer
106 Hawthorn Bldg
Penn State Altoona
Phone: 814-949-5265
Email: dxh41@psu.edu

Altoona College, University Park

ADVANCED BUSINESS (ALADBU)

Penn State's advanced business certificate can help develop a student's skills in spoken communication and quantification. In a very flexible way, students explore functional fields of business. Students who complete the advanced business certificate will have completed almost half of the credits required for Penn State Altoona's associate degree in Business. (2BAAL) Only students who have completed all courses required for the basic business certificate are eligible to earn an Advanced Business Certificate. No course may count toward both the basic certificate and the advanced certificate in business.

To earn an undergraduate certificate in ADVANCED BUSINESS, a minimum of 15 credits is required.

PRESCRIBED COURSES

CAS 100
MATH 21
ECON 102 OR ECON 104
OR ACCTG 211 OR BA 243 OR BA 250
OR CMPSC 203 OR IST 220 OR IST 250
OR LER 100 OR LER 136
OR MIS 204 OR MIS 103
OR STAT 200 OR SCM 200
OR SRA 111 OR SRA 211

BA 241 with BA 242 are equivalent to BA 243. Choose 6 credits from the courses listed in the "AND OR" list. Only students who have completed the basic business certificate (ALBUS) are eligible to earn the advanced business certificate (ALADBU). No course may count toward both the basic certificate and the advanced certificate in business.

Prerequisites Required.

Effective Date: Summer 2009

Expiration Date:

Last Revised by the Department: 04/04/2012

AL ALB&E

ADVANCED ENTREPRENEURSHIP

Undergraduate Certificate Program

Donna Bon
107 Hawthorn Bldg
Penn State Altoona
Phone: 814-949-5294
E-mail: djb36@psu.edu

Altoona College

ADVANCED ENTREPRENEURSHIP (ALAENT)

The advanced certificate in entrepreneurship develops students' skills in oral communication and quantification, particularly financial quantification. Knowing how to use financial information provided by financial statements and understanding the economic environment in which a business operates is a key to success for small business owners.

To earn an undergraduate certificate in ADVANCED ENTREPRENEURSHIP, a minimum of 13 credits is required.

PRESCRIBED COURSES

MATH 21
ACCTG 211
CAS 100A
BA 297

No Prerequisites Required.

Effective Date: Fall Semester 2007

Expiration Date:

Last Revised by the Department: 04/04/2012

AL ALB&E

BASIC CRIMINAL JUSTICE

Undergraduate Certificate Program

Mary Ann Probst
103 Cypress Bldg
Penn State Altoona
Phone: 814-949-5352
Email: map141@psu.edu

Altoona College, University Park

BASIC CRIMINAL JUSTICE (ALBCJ)

The Criminal Justice certificate will help students prepare for immediate career opportunities. This 18 credit certificate focuses on the understanding of both our justice system and national government. After concentrating on the dilemmas and controversies presented by the problems of administering justice in a complex society, graduates of this certificate program will have the background to be educated, thoughtful, and intelligent citizens.

To earn an undergraduate certificate in BASIC CRIMINAL JUSTICE, a minimum of 18 credits is required.

PRESCRIBED COURSES

CAS 100A
CRIMJ 100
ENGL 15
SOC 12
CRIMJ 210
CRIMJ 220
CRIMJ 230
PLSC 1 OR PSYCH 100 OR SOC 1

No Prerequisites Required.

Effective Date: Spring Semester 1996

Expiration Date:

Last Revised by the Department: 11/07/2011

AL ALEHS

BASIC BUSINESS

Undergraduate Certificate Program

Deborah Hommer
106 Hawthorn Bldg
Penn State Altoona
Phone: 814-949-5265
Email: dxh41@psu.edu

Altoona College, University Park

BASIC BUSINESS (ALBUS)

Penn State's Basic Business Certificate Program provides you with a solid foundation in essential business concepts and offers a convenient way to "step up" to a degree. The basic certificate program gives you an understanding of management and marketing, and helps you improve your written English. The certificate allows you to customize your learning through a series of business-related electives to meet your specific needs and interests. (Required courses: ENGL 15, MGMT 100 and MKTG 220) Electives nine additional credits select from the following groupings: BA 241 and BA 242 (BA 241 and 242 must be taken together as an elective) or BA 243, LER 100, MIS 103 or MIS 204, IST 110 or SRA 111.

To earn an undergraduate certificate in BASIC BUSINESS, a minimum of 18 credits is required.

PRESCRIBED COURSES

ENGL 15
MGMT 100
MKTG 220
OR MIS 204 OR MIS 103
OR BA 243 OR BA 241 OR BA 242
OR IST 110 OR SRA 111
OR LER 100

BA 241 with BA 242 are equivalent to BA 243. Choose 9 credits from the courses listed after "AND OR"

No Prerequisites Required.

Effective Date: Summer 2009

Expiration Date:

Last Revised by the Department: 11/07/2011

AL ALB&E

CHEMICAL DEPENDENCY PREVENTION AND COUNSELING

Undergraduate Certificate Program

Anna Rose Eckenrode
200 Devorris Downtown Center
Penn State Altoona
Phone: 814-949-5039
E-mail: are125@psu.edu

Altoona College, Penn State DuBois, Penn State Greater Allegheny

CHEMICAL DEPENDENCY PREVENTION AND COUNSELING (ALCDPC)

The Certificate in Chemical Dependency Prevention and Counseling consists of 18 credits and is offered through Penn State Altoona Education, Human Development and Social Sciences and Penn State Altoona Continuing Education. The certificate introduces students to basic concepts related to chemical dependency, its prevention and treatment, and helping those with problems associated with chemical dependency. This certificate will provide students with the academic background to understand content, models, theories and research relevant to working with chemically dependent persons and their families. Upon completion of a total of 18 credits in the program, students are awarded an academic certificate of achievement from Penn State Altoona.

To earn an undergraduate certificate in CHEMICAL DEPENDENCY PREVENTION AND COUNSELING, a minimum of 18 credits is required.

PRESCRIBED COURSES

CNED 401
BBH 143
HLHED 443 OR CNED 421
RHS 301
CNED 404
HDFS 414 OR CNED 416 OR CNED 420 OR CNED 423

Spring '09 - CNED 403 was replaced by RHS 301

No Prerequisites Required.

Effective Date: Fall Semester 2002

Expiration Date:

Last Revised by the Department: 11/07/2011

AL ALEHS

BASIC ENTREPRENEURSHIP

Undergraduate Certificate Program

Donna Bon
107 Hawthorn Bldg
Penn State Altoona
Phone: 814-949-5294
E-mail: djb36@psu.edu

Altoona College

BASIC ENTREPRENEURSHIP (ALENT)

The basic certificate in Entrepreneurship provides students with a solid foundation in written communication skills, management, and marketing as well as methods for managing small businesses in entrepreneurial environments.

To earn an undergraduate certificate in BASIC ENTREPRENEURSHIP, a minimum of 18 credits is required.

PRESCRIBED COURSES

ENGL 15
MKTG 221W
MGMT 301
BA 250
OR ECON 2 OR ECON 14 OR BA 197

No Prerequisites Required.

Effective Date: Fall Semester 2007

Expiration Date:

Last Revised by the Department: 04/04/2012

AL *A

INFORMATION SYSTEMS SECURITY

Undergraduate Certificate Program

Jungwoo Ryoo
101 Eiche Library
Penn State Altoona
Phone: 814-949-5243
E-mail: jxr65@psu.edu

Altoona College

INFORMATION SYSTEMS SECURITY (ALISS)

By earning this 17 credit certificate in Information Systems Security, the learner will gain knowledge to identify and resolve potential security problems before they become serious and costly. The successful student will be proficient in computer networking and security for both wired and wireless systems, installation and configuration of firewalls and intrusion detection and prevention, risk analysis and management, security management using policies and access control, fault tolerance, disaster recovery planning, computer forensics and investigations, cryptography, and physical security.

To earn an undergraduate certificate in INFORMATION SYSTEMS SECURITY, a minimum of 17 credits is required.

PRESCRIBED COURSES

IST 110 OR CMPSC 203 OR CMPSC 101 OR MIS 204
IST 210
IST 220
IST 451
IST 402
IST 250 OR MIS 302

No Prerequisites Required.

Effective Date: Spring Semester 2004

Expiration Date:

Last Revised by the Department: 11/07/2011

AL ALB&E

Information Systems Auditing

Undergraduate Credit Certificate

Information Systems Auditing (ALISTA)

The worlds of accounting and digital information systems, particularly in the area of information security, have become intertwined. Penn State Altoona has created a certificate program to help IT and accounting professionals acquire the skills they need for maintaining and auditing digital information systems. This Information Systems Auditing Certificate, for students enrolled in accounting, business with an accounting option, information sciences and technology, security risk analysis or other related majors integrates critical areas of knowledge of IT and accounting.

Students who complete the certificate program will develop skills useful in obtaining other professional credentials, such as the Certified Information Systems Auditor (CISA) or Certified Information Technology Professional (CITP) credentials.

PRESCRIBED COURSES (37 credits)

SRA 111 GS(3), CMPSC 101 GQ(3), ACCTG 211(4), IST 220(3), SRA 221(3), ACCTG 471(3), ACCTG 472(3), ACCTG 432(3), ACCTG 403(3) or ACCTG 403W(3), IST 456(3), ACCTG483(3), IST 454(3)

BEHAVIORAL HEALTH AND COUNSELING PSYCHOLOGY

Undergraduate Certificate Program

Dr. Melanie Hetzel_Riggin
Penn State Behrend School of Humanities and Social Sciences
Phone: 814-898-6949
E-mail: mdh33@psu.edu

Abington College, Altoona College, Behrend College, Capital College, Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Great Valley, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York, University Park

BEHAVIORAL HEALTH AND COUNSELING PSYCHOLOGY (BH&PSY)

This 15 credit certificate provides the core information and competencies for students interested in pursuing a position in behavioral health and clinical or counseling psychology. It will be attractive to both psychology majors interested in pursuing clinical psychology and adult students taking courses part time for career advancement. This may also serve as the gateway to a minor or major in psychology. It is consistent with psychology program goals to develop clear career tracks for current students in clinical and counseling psychology.

To earn an undergraduate certificate in BEHAVIORAL HEALTH AND COUNSELING PSYCHOLOGY, a minimum of 15 credits is required.

PRESCRIBED COURSES

PSYCH 270
PSYCH 481
PSYCH 495

IN ADDITION TO THE 9 CREDITS OF COURSE WORK LISTED, STUDENTS MAY CHOOSE ANY TWO (6 CREDITS) OF THE FOLLOWING COURSES FOR A TOTAL OF 15 CREDITS FOR THE CERTIFICATE: PSYCH 238, PSYCH 243, PSYCH 404/EDPSY 450, PSYCH 423, PSYCH 473, PSYCH 476, PSYCH 478, PSYCH 470, PSYCH 471, PSYCH 477, PSYCH 474

Prerequisites Required.

Effective Date: Spring Semester 2011

Expiration Date:

Last Revised by the Department: 03/05/2012

BC

Foundations of Employment Relations & Leadership

Undergraduate Certificate Program

Complete a Penn State 12-credit certificate during the Fall & Spring semesters of one academic year.

Increase your leadership and management skills while gaining skills that are characteristic of effective leaders.

Gain specialized knowledge on workplace and employment issues from both the employee's and employer's perspective.

Build your resume to advance your career.

Prescribed Courses

OLEAD 100(3), LER 100(3), LER 435(3), OLEAD/LER 465(3)

BUSINESS ADMINISTRATION

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State Beaver, Penn State Brandywine, Penn State York

BUSINESS ADMINISTRATION (BUSADM)

This is the third step up certificate to our Associate Degree in Business. It is designed for adult students.

To earn an undergraduate certificate in BUSINESS ADMINISTRATION, a minimum of 12 credits is required.

PRESCRIBED COURSES

MATH 21
MGMT 301
MKTG 301W or MKTG 301 (Please take MKTG 301W if writing requirement needs fulfilled)
ENGL 202D

REQUIRES MATH 4 OR SUCCESSFUL COMPLETION OF ENTRANCE EXAM

Prerequisites Required.

Effective Date: Spring Semester 2007

Expiration Date:

Last Revised by the Department: 11/14/2011

CC CCBUS

BUSINESS CONCEPTS CERTIFICATE

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State Brandywine, Penn State Hazleton, Penn State Worthington Scranton

BUSINESS CONCEPTS CERTIFICATE (BUSCON)

The Business Concepts Certificate gives participants an overview of management concepts. This certificate was created for Tobyhanna Army Depot. When taken with the Supply Chain and Materials Management Certificate it gives the participant a certificate in Supply Chain Administration.

To earn an undergraduate certificate in BUSINESS CONCEPTS , a minimum of 10 credits is required.

PRESCRIBED COURSES

MGMT 301
ECON 104
BA 243

Prerequisites Required.

Effective Date: Fall Semester 2010

Expiration Date:

Last Revised by the Department: 04/05/2012

CC

BUSINESS ESSENTIALS

Undergraduate Certificate Program

Deborah Hommer
106 Hawthorn Bldg
Penn State Altoona
Phone: 814-949-5265
Email: dxh41@psu.edu

Altoona College, Penn State Lehigh Valley, Penn State Worthington Scranton, University Park

BUSINESS ESSENTIALS (BUSESS)

Business Essentials is a two-part program that gives you a foundation in marketing, management and organizational behavior, accounting, financial analysis, and organizational performance, and an integrated understanding of how these disciplines interact in a multifunctional organization. You will learn to observe an organization from the inside as you analyze its culture, strategy, and performance--and from the outside as you learn how strategy plays out with customers, investors, and other stakeholders. Certificate recipients must be approved for the Business Essentials Program. (MGMT 301 and MKTG 301 must be taken together, and ACCTG 211 and FIN 301 must be taken together)

To earn an undergraduate certificate in BUSINESS ESSENTIALS, a minimum of 13 credits is required.

PRESCRIBED COURSES

MGMT 301
MKTG 301
ACCTG 211
FIN 301

No Prerequisites Required.

Effective Date: Spring Semester 2005

Expiration Date:

Last Revised by the Department: 11/07/2011

AL ALB&E

Corporate Control and Analysis

Undergraduate Credit Certificate Program

Schalyn Sohn
354 Business Building
University Park, PA 16802
Phone: 814-865-0041
E-mail: cca@smeal.psu.edu

CORPORATE CONTROL AND ANALYSIS (CCA)

Students enrolled in the Smeal College of Business accounting major can augment their studies with the Corporate Control and Analysis certificate program (CCA), provided they meet the program's admission requirements. CCA requires eleven credit-hours in accounting, financial statement analysis, and communications. Students must also complete an approved internship. CCA prepares students for careers as management accountants. Students in the program are encouraged to seek a professional credential in management accounting, such as the Certified Management Accountant (CMA) designation through the Institute of Management Accountants.

All certificate courses must be earned through faculty in the Smeal College of Business.

ADMISSION REQUIREMENTS:

Application to the program is concurrent with an application to the Smeal College Accounting major. To be considered for the certificate, applicants must submit an on-line application and have completed the following courses with a combined GPA of 3.40 or higher: ACCTG 211, ECON 102, MATH 110 (or MATH 140), and SCM 200 (or STAT 200).

For more information and to submit the on-line application, go to:

<http://www.smeal.psu.edu/accounting/programs/cca>

PRESCRIBED COURSES

ACCTG 404 - Managerial Accounting Economic Perspective (3)
ACCTG 417 - Corporate and Managerial Communication (2)
ACCTG 440 - Advanced Management Accounting (3)
ACCTG 481 - Financial State Analysis: Accounting Based Evaluation and Decision Making (3)

A grade of C or better is required in all courses.

Students must complete an approved internship program.

Prerequisites required.

Effective Semester: Fall Semester 2015

Child Development

Undergraduate Certificate Program

Dr. Melanie Hetzel-Riggin
Penn State Behrend School of Humanities and Social Sciences
108 Turnbull Hall
mdh33@psu.edu
814-898-6949

Abington College, Altoona College, Berks College, Capital College, Great Valley, Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park
Behrend College is the home college.

CHILD DEVELOPMENT (CHD DV)

This 15 credit certificate will provide the core information and competencies for students interested in pursuing the field of child development. Students will be provided with a broad overview of the developmental processes underlying child and adolescent development. This certificate will be attractive to both psychology majors as well as adult students taking courses part time for career advancement. The certificate may also serve as the gateway to a minor or major in psychology. It is consistent with psychology program goals to develop clear career tracks for current students interested in the applied fields of psychology.

PRESCRIBED COURSES

PSYCH 212 or HDFS 129

Select six credits from the following: PSYCH 410, PSYCH 412, PSYCH 476

Select six credits from the following: EDPSY 14, HDFS 229, PSYCH 221, PSYCH 238, PSYCH 256, PSYCH 413, PSYCH 414, PSYCH 473.

Effective Semester: Spring 2012

Comparative and International Education Certificate (CI ED)

Undergraduate Certificate Program

Walter Fullam
Penn State Berks
wff1@psu.edu
Phone: 610-396-6223

Penn State Berks

Comparative and International Education Certificate (CI ED)

The undergraduate CI ED Certificate is designed to enhance the degree completion requirements through international field experiences and provide opportunities to investigate multiple education theories, policies and practices. The balance of course and fieldwork is intended to increase students' inquiry, awareness and understanding of the dynamics of working with multi-cultural and diverse students through in-class and field opportunities. The program will facilitate and guide the candidate's inquiry into understanding diverse education systems and encourage sensitivity toward multicultural students to address the increasingly diverse U.S. classroom population.

Admission Requirements:

Any full time student currently enrolled at Penn State Berks is eligible to earn the certificate of Comparative and International Education.

Requirements for Completion:

9 Credits:

1) International Travel course (3 Cr) such as the following:

- a. CI 495 (Internship) (1-18) Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.

2) Comparative Education course (3 Cr.) such as one of the following:

- b. EDTHP 401 (3 Cr) or 3 credits of another international culture or global experience course as approved by the department.

3) International culture course (3 Cr.) such as the following*:

APLNG 493 (Teaching English as a Second Language)
CMLIT 10 (Introduction to World Literature)
ENGL 182C (Literature and Empire)
FR 139 (France and the French Speaking World)
GEOG 126 (Economic Geography)
HIST 175 (Modern Asian History)
INTST 100 (Introduction to International Studies)
MUSIC 9 (Introduction to World Musics)
WLED 400 (Foundations of Language and Second Language Teaching)
Third level of a world language

*or international culture course as approved by the faculty.

Effective Semester: Fall 2013

Production and Inventory Management

Non-credit Certificate

Edwin Daveski
H208 Hayfield House
Lehman, PA
Phone: 570-675-9253
E-mail: ejd14@psu.edu

The Production and Inventory Management certificate program is a structured series of courses that are designed to help participants take charge of planning and controlling the production, manufacturing, and inventory systems within a company or an organization.

Requirements for Certification (7.2 Units)

Required Courses
OPMGT 5090C (2-4)
OPMGT 5094C (4)

Effective Semester: Spring 2018
Expiration Semester: Spring 2023

AUTOCAD

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Altoona College, Berks College, Penn State Hazleton

AUTOCAD (CR CAD)

The AutoCAD : Computer-Aided Drafting Certificate is an introduction to AutoCAD , the industry standard for high quality engineering graphics. Knowing AutoCAD will open many doors for you in the workplace. In fact, more and more jobs require a working knowledge of AutoCAD , an industry standard for high-quality engineering graphics. Classes will be "hands on" in the computer lab during convenient evening hours. Students who take the classes in this certificate will: Learn drawing vocabulary used on blueprints-apply that vocabulary to produce drawings; Understand sectional views; Create 2D drawings; Develop computer skills for drafting-learn commands, views, etc.; Create 3 D models.

To earn an undergraduate certificate in AUTOCAD, a minimum of 8 credits is required.

PRESCRIBED COURSES

EDSGN 100 (3)
EGT 102(1)
EGT 114(2)
EGT 201(2)

No Prerequisites Required.

Effective Date: Fall Semester 2001

Expiration Date:

Last Revised by the Department: 12/06/2011

CC CCBUS

Crime, Psychology, and Public Policy

Undergraduate Certificate Program

Behrend

Nicole Shoenberger
107 PARC
Penn State Erie
814-898-6768
Email: nas25@psu.edu

Crime, Psychology, and Public Policy (CRMPPP)

The 15 credit undergraduate certificate program in Crime, Psychology, and Public Policy (CRMPPP) provides students an overview of the causes of crime and criminal behavior, the legal and criminal justice processes, and public policy toward crime-related issues. Students receive an in-depth understanding of the social and psychological causes of crime, policies to fight and prevent crime, the use of psychology to analyze and investigate criminal behavior, and the legal processes that involve accused and convicted criminals. The certificate program is intended for those who are interested in learning more about the criminal justice system and the causes of crime. Knowledge of the causes of criminal behavior and the criminal justice system are important to careers in the police, security, the correctional system, social work, law, psychology, journalism, and government or politics.

List of Courses* Included in the Certificate:

Take 3 credits in each of the following subject areas from a program list of approved courses

Criminology

Approved list of courses:
SOC 12(GS). Criminology

Crime and the Individual

Approved list of courses:
PSYCH 243(GS). Introduction to Well-being and Positive Psychology
PSYCH 256(GS). Introduction to Cognitive Psychology
PSYCH 261(GS). Introduction to Psychology of Learning
PSYCH 270. Introduction to Abnormal Psychology
PSYCH 412. Adolescence
PSYCH 473. Behavior Modification
PSYCH 476. Child Psychopathology

Crime and Society

Approved list of courses:
CRIMJ 423. Sexual and Domestic Violence
PSYCH 221(GS). Introduction to Social Psychology
PSYCH 232(GS;US;IL). Cross-Cultural Psychology
PSYCH 445. Forensic Psychology
SOC 13(GS). Juvenile Delinquency

Crime and Public Policy

Approved list of courses:
PLSC 2. American Public Policy
PLSC 123(GS;US;IL). Ethnic and Racial Politics
PLSC 177(GS). Politics and Government in Washington, DC
PLSC 419. The Bureaucratic State
PLSC 439. The Politics of Terrorism
PLSC 482. American State and Urban Politics
PLSC 489. Public Administration

Crime and Law*

Approved list of courses:
PLSC 178. Organized Crime, Law, and Politics
PLSC 471. American Constitutional Law
PLSC 472. The American Legal Process
PLSC 473. American Judicial Behavior
PLSC 487. International Law and Organizations

Effective Semester: Summer 2014

INFORMATION AND CYBER SECURITY CREDIT

Undergraduate Certificate Program

Jerry Bachert
111 Luerssen Bldg
Penn State Berks
Phone: 610-396-6221
E-mail: jrb57@psu.edu

Berks College

INFORMATION AND CYBER SECURITY CREDIT (CYBER)

This program is designed for working adults who are currently employed in the information technology field or have a strong background in ID and familiarity with computer networking. Course work should be completed within two-three years

To earn an undergraduate certificate in INFORMATION AND CYBER SECURITY CREDIT, a minimum of 9 credits is required.

PRESCRIBED COURSES

SRA 111
SRA 221
IST 451
IST 452
IST 402
IST 454

Prerequisites Required.

Effective Date: Fall Semester 2011

Expiration Date: Spring Semester 2015

Last Revised by the Department: 11/29/2011

BL BLHSS

CHILDREN, YOUTH AND FAMILY SERVICES

Undergraduate Certificate Program

Devon Thomas
119 Health and Human Development
University Park
Phone: 814-863-8000
Email: dmc233@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park, World Campus

CHILDREN, YOUTH AND FAMILY SERVICES (CYF)

This certificate program is designed to improve the quality of planned programs in a wide variety of community settings. The primary goal of the program is to provide a flexible and convenient opportunity for self-enhancement, further education and professional development for those currently working or considering a career in human service settings. Courses are required in three areas: Foundation Courses (9 credits), Professional Core (15 credits) and Professional Electives (6 credits).

To earn an undergraduate certificate in CHILDREN, YOUTH AND FAMILY SERVICES, a minimum of 30 credits is required.

PRESCRIBED COURSES

ENGL 15 OR CAS 100
PSYCH 100 OR SOC 1
BIOL 141 OR BISC 4 OR NUTR 251
HDFS 129 OR HDFS 229 OR HDFS 239 OR HDFS 311
HDFS 315 OR HDFS 315Y
FIN 108 OR HDFS 395 OR HDFS 216 OR HDFS 218
BBH 101 OR KINES 60
PHIL 103 OR PHIL 103W OR HDFS 301
HDFS 330

Prerequisites Required.

Effective Date: Spring Semester 2006

Expiration Date:

Last Revised by the Department: 11/14/2011

HH HD FS

Contact info update: 7/30/14

DIGITAL ARTS

Undergraduate Certificate Program

Graeme Sullivan
210 Patterson Bldg
University Park
Phone: 814-865-0444
E-mail: gls27@psu.edu

World Campus

DIGITAL ARTS (DART)

This 15-credit course will help you master the powerful combination of artistic knowledge and technical skills necessary to create professional, high-quality digital portfolios. You will learn some of the latest production techniques for generating computer-based graphics, digital photography, and media-rich Web productions.

To earn an undergraduate certificate in DIGITAL ARTS, a minimum of 15 credits is required.

PRESCRIBED COURSES

ART 10 OR ART 20 OR ART 100
ART 201 OR ART 203
ART 211
ART 302
ART 402

No Prerequisites Required.

Effective Date: Spring Semester 2009

Expiration Date:

Last Revised by the Department: 11/07/2011

AA VARTS

DIVERSITY STUDIES

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State Shenango

DIVERSITY STUDIES (DIV)

This certificate is designed to provide students with an overview of issues concerning diversity. Students will take one foundational class and additional courses examining women, gender, sexuality, race, ethnicity, and religion.

PRESCRIBED COURSES

Twelve credits are required for the certificate, three of which must be at the 400-level. A course grade of C or higher is required.

Take three credits from the following list:

AMST 105
PSYCH 232
SOC 5
WMNST 1
WMNST 3

Take nine credits from an approved list of courses.

No prerequisites required.

Effective Date: Fall Semester 2007

Expiration Date:

Last Revised by the Department: 02/08/2016

CC

Diversity Studies

Undergraduate Certificate Program

Laura Spielvogel
134 Willard Building
University Park, PA 16802
Phone: 814-865-5254
E-mail: lts5125

Liberal Arts

Diversity Studies (DIVSTD)

The Diversity Studies certificate is an interdisciplinary and online program of study that explores social difference and inequality related to gender, race, ethnicity, sexuality, class, aging, religion, and disability. How we experience and view the world around us, the opportunities presented to us, and even the people that we surround ourselves with are constrained by invisible and unconscious systems of power. These systems organize our schools, workplaces, healthcare systems, criminal justice system, and media, and reproduce inequality rooted in ignoring or downplaying diversity. The Diversity Studies certificate will encourage students to take an intersectional approach to expose, critique, and confront historical and contemporary sources of social inequality. This certificate will enable students to complement their existing course portfolio by providing an opportunity to deepen their knowledge around issues of difference through a broad range of interdisciplinary coursework. An interdisciplinary approach will make it easier for students to see connections across disciplines and allow them to cluster their coursework in a meaningful and related way. Given the breadth of courses currently offered through World Campus on diversity, as well as the relative flexibility of the proposed certificate, new course development is minimal. Delivery of coursework exclusively through existing online courses will allow the most flexibility to our diverse student population. The Diversity Studies certificate is designed to encourage reflection on the ethical challenges that arise when we become aware of how privilege, power, and difference are embedded in our world and daily lives. The aim is to move the discourse away from mere tolerance, celebration or appreciation to a deeper understanding and critique of discrimination, intolerance, and inequality in the historical and contemporary global society. The certificate will provide students with skills vital to careers in fields such as human resources, non-profit agencies, social welfare, education, and health and medicine. We have designed the certificate around an intersectional perspective that invites students to see the ways that race, class, gender, disability, sexuality, etc. operate together in overlapping and conflicting ways to affect all aspects of human experience. WMNST 105N, the one PRESCRIBED course for the certificate, introduces students to this intersectional perspective and situates discussions of race, class, gender, sexuality, ethnicity, and disability within institutional spaces that include: education, the family, work, religion, the criminal justice system, and the media. After completing this course, students are then required to take 3 credits of ADDITIONAL COURSES that include: AFAM 100, WMNST 100, WMNST 106, and ENGL 245/WMNST 245. These courses were selected because they all explicitly take this intersectional approach to understanding social identity, privilege and inequality. After the completion of at least 6 introductory credits, students should be conversant in intersectional, feminist, and critical theory and able to: 1) Apply basic theories of identity, difference, social power and privilege to a wide range of textual and visual materials, and to their own interactions in the context of day-to-day life. 2) Critically engage how race, gender, sexuality, class, ethnicity, and disability have been constructed in the United States. 3) Consider transnational dimensions of similar dynamics and contrast these with the United States context. 4) Identify and analyze the multiple ways individuals, communities, and social movements have resisted and remade categories of identity and changed relations of power over time and space. 5) Recognize and explore the constructions of social identity. For the 6 remaining credits for the certificate, students are given the freedom to choose SUPPORTING COURSES AND RELATED AREAS according to their particular area of interest and/or career focus, be it Human Development and Family Studies, Sociology, Anthropology or Communication Arts and Sciences. We have carefully reviewed the syllabi for all of the courses to be included in the certificate to ensure that, despite having different programmatic orientations, all adhere to a common commitment to understanding power and inequality from a social justice perspective. Given the number of online courses at our university that examine issues of diversity, it is important to allow students to select a portion of their certificate coursework based on what will be most interesting and useful to them in their academic and professional lives.

REQUIREMENTS FOR THE CERTIFICATE (12 credits)

REQUIRED COURSES (12 credits)

PRESCRIBED COURSES

WMNST 105N(3)

ADDITIONAL COURSES

Students select 3 credits from: AFAM 100(3); WMNST 100(3); WMNST 106N(3) or WMNST/ENGL 245(3)

Students select 6 credits from: AFAM/SOC 409(3); AFR 110(3); AMST 140(3); ANTH 1(3); ANTH 45(3); ANTH 146(3); ASIA 100(3); BBH 302(3); BBH 315(3); CAS 271(3); CAS 426(3); CAS 455(3); CMLIT 10(3); CMLIT 153(3); COMM 205(3); CRIM/SOC 201(3); CSD 269(3); FR 139(3); HDFS 249(3); HDFS 250(3); HIST 479(3); JST 10(3); LER/WMNST 136(3); LER 410(3); OLEAD 410(3); OLEAD 411(3); PLSC 110(3); RHS 100(3); RHS 410(3); RLST 1(3); RPTM 120(3); SOC 35(3); SOC 119(4); SOC 456(3); SPLED 461(3); WMNST 100(3); WMNST/ENGL 245(3)

Enterprise Architecture (ENARCH)

Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies, College of IST
332G Information Sciences and Technology Building
University Park
Phone: 814-863-3450
E-mail: mur13@psu.edu

University Park

This 12 credit certificate applies architecture principles related to the orderly arrangement of parts to analyze the components, structure and connectivity of business, data, application, technology and security architecture and identify their relationships to each other and to the strategy of the organization. The primary purpose of describing the architecture of an enterprise is to improve the effectiveness, efficiency, and agility of the organization. This includes innovating the structure of an organization, centralizing business processes, assuring quality and timeliness of information and ensuring that money spent on information technology can be justified.

A grade of C or higher is required in all courses for the certificate; no course substitutions are permitted. Courses taken more than 10 years ago will not apply automatically towards completion of the certificate but instead will require review by the academic unit.

Required Courses

IST 422 (3)
IST 423 (3)
IST 424 (3)

Additional Courses

3 credits from: SRA 221, IST 412, IST 432, IST 443, IST 452, IST 456 or SRA 468

Effective: Summer Session 2013

ENGINEERING DESIGN

Undergraduate Certificate Program

Charles D. Cox
124 Hammond Bldg
University Park
Phone: 814-867-4864
E-mail: cxc655@psu.edu

University Park

ENGINEERING DESIGN (ENDSN)

The certificate will provide an opportunity to pursue a specialization in engineering design; provide an incentive to take more courses in design, participating in more design projects; and improve their employment prospects. For entrance, students must be at least 4th semester standing. The GPA considered for admission will be consistent with, or equivalent to, the GPA required for entrance to any major in the student's department. Students must earn a B grade or better in each qualifying course or independent study or pursue a replacement option. A minimum of 13 credits is required for completion of the certificate with no fewer than 6 credits at the 400- or 500- level.

To earn an undergraduate certificate in ENGINEERING DESIGN, a minimum of 13 credits is required.

PRESCRIBED COURSES

EDSGN 100 OR MATSE 492
BE 467 OR AE 470 OR BME 419
OR CE 410 OR ESC 481 OR IE 466
OR STS 233 OR PHIL 233
EDSGN 496

Students must complete an application and be at least 4th semester standing. No fewer than 6 credits of certificate courses at the 400- or 500-level. Students must earn a "B" or better in each qualifying course.

Prerequisites Required.

Effective Date: Spring Semester 2007

Expiration Date:

Last Revised by the Department: 11/11/2011

ENSETCE

ENERGY SYSTEM CERTIFICATE

Undergraduate Certificate Program

Jerry Bachert
111 Luerksen Bldg
Penn State Berks
Phone: 610-396-6221
E-mail: jrb57@psu.edu

Berks College

ENERGY SYSTEM CERTIFICATE (ENERGY)

The Energy Systems Certificate at Penn State Berks provides students with detailed knowledge in the fields of power generation and distribution. Students with relevant experience and a strong math aptitude can enroll in courses that are part of the Energy Systems Certificate an non-degree students. Qualified non-degree students will need to complete 21 credits of course work to complete the requirements for the certificate.

To earn an undergraduate certificate in ENERGY SYSTEM , a minimum of 21 credits is required.

PRESCRIBED COURSES

EET 105
EET 114
EET 118
EET 214
EET 215
EET 275
CMPET 211
SRA 221

Prerequisites Required.

Effective Date: Fall Semester 2011

Expiration Date: Spring Semester 2015

Last Revised by the Department: 11/29/2011

BL BL EB

ENGINEERING AND COMMUNITY ENGAGEMENT

Undergraduate Certificate Program

Tom Colledge
213P Hammond Bldg
University Park
Phone: 814-863-1527
E-mail: thc100@psu.edu

University Park

ENGINEERING AND COMMUNITY ENGAGEMENT (ENGCO)

A certificate in Engineering and Community Engagement is proposed for students in the College of Engineering. This certificate is intended to acknowledge students who have gained proficiency in design, research and application of appropriate technologies for use in serving communities in the U.S. and abroad while stressing an awareness of the cultural context of such engineering activities. Collaborations with communities are strongly encouraged along with emphasis on the importance of ethical considerations in collaborating/working in community settings. All students in good academic standing are eligible for admission to the program.

To earn an undergraduate certificate in ENGINEERING AND COMMUNITY ENGAGEMENT, a minimum of 12 credits is required.

PRESCRIBED COURSES

YFE 211
EDSGN 352
EDSGN 452
ENGR 496
ENGR 411 OR ENGR 425 OR ENGR 408 OR ENGR 493
OR EDSGN 395

Core requirements for the certificate program include courses in both: a) Community Engagement, and b) U.S. and International Cultures. These courses may be scheduled to satisfy general education requirements (GS/GH/US/IL) depending on the courses selected. Beyond that, students have various course options available to them to complete the 12 credits requirement for the certificate including project-based courses in: a) design, b) entrepreneurship, and c) leadership. Students will be strongly encouraged to meet with the program director to discuss and formulate their program of study in the certificate program.

Prerequisites Required.

Effective Date: Spring Semester 2007

Expiration Date:

Last Revised by the Department: 11/11/2011

EN SEDTP

ENVIRONMENT AND SOCIETY GEOGRAPHY

Undergraduate Certificate Program

Karl Zimmerer
309 Walker Bldg.
University Park, PA 16802
Phone: 814-865-3094
E-mail: ksz2@psu.edu

ENVIRONMENT AND SOCIETY GEOGRAPHY (ENSGEO UCT)

The 12-credit Certificate in Environment and Society Geography will engage students with issues, knowledge, and diverse forms of learning, analysis, and exposition related to the interactions of human societies and environments. This certificate is based on the twin foundations of this sub-field of geography, namely human-environment interactions and nature-society relations. Its purpose is to train students to use frameworks such as political ecology and environmental geography to provide the tools and concepts of change and sustainability necessary to analyze human-environment systems, environmental problems and remediation across local-to-global scales, and the political economy of resource use and management. Learning objectives: Identify, describe, and analyze human-environment systems and processes across the globe; recognize how humans depend on, alter, and manage their environment in various places; and think critically about addressing complex human-environment challenges.

REQUIRED COURSES

GEOG 230(3)

Select 9 credits from: GEOG 330(3); GEOG 333(3); GEOG 430(3); GEOG 431(3); GEOG 432(3); GEOG 433(3); GEOG 434(3); GEOG 435(3); GEOG 436(3); GEOG 438(3); GEOG 439(3)

NON-COURSE REQUIREMENTS

Per University policy, all credit courses for a certificate require a grade of 'C' or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.

Effective Date: Fall 2017

ORACLE EBUSINESS SUITE

Undergraduate Certificate Program

Janice Tottleben
281 Jack Burke Res Center
Penn State Erie
Phone: 814-898-6109
E-mail: jat14@psu.edu

Behrend College

ORACLE EBUSINESS SUITE (ERPBC)

The Certificate in Oracle eBusiness Suite will instruct you in Oracle Enterprise Resource Planning software. Oracle ERP is an integrated multi-module application software that supports business processes. Oracle is one of the top ERP vendors and the skills gained by learning this software will allow you to become more valuable in the current marketplace. This program enables students to become proficient in Oracle Supply Chain and prepares them for the Oracle Supply Chain Certified Professional Consultant exams. Students must earn a "C" or better in each of the required courses to earn the Certificate.

To earn an undergraduate certificate in ORACLE EBUSINESS SUITE, a minimum of 9 credits is required.

PRESCRIBED COURSES

MIS 405
MIS 406
MIS 407

Prerequisiste

MIS 336 is a prerequisite for MIS 407

Effective Date: Spring Semester 2010

Expiration Date:

Last Revised by the Department: 10/27/2014

BC BSCH

Enterprise Resource Planning with Oracle

Undergraduate Certificate Program

Janice Tottleben
271 Burke Center
Penn State Erie
5101 Jordan Road
Erie, PA 16563
Phone: 814-898-6109
E-mail: jat14@psu.edu
Penn State Erie

Enterprise Resource Planning with Oracle

The Certificate in ERP with Oracle will instruct you in Oracle Enterprise Resource Planning software. Oracle ERP is an integrated multi-module application software that supports business processes. Oracle is one of the top ERP vendors and the skills gained by learning this software will allow you to become more valuable in the current marketplace. Oracle certification is valuable to hiring managers who want to distinguish among candidates for critical IT positions. This program enables students to become proficient in Oracle applications and system software and prepares them for the Oracle Certified Professional Consultant exams. Students who complete this certificate will have the ability to implement, integrate, and support eBusiness applications.

Oracle eBusiness is one of the most widely implemented ERP packages worldwide and is used by customers in more than 150 countries. ERP skills are in demand and salaries are on the rise. The certificate in Oracle eBusiness Suite will allow you to become more valuable in the current marketplace and will distinguish you among candidates for critical positions within all functional areas in an organization.

There are 9 credits required for this certificate and an additional 12-13 credits in prerequisites depending on courses chosen.

PRESCRIBED COURSES

Select 9 credits from the following:

MIS 404
MIS 405
MIS 406
MIS 407

Effective Semester: Spring Semester 2016

Earth Sustainability

Undergraduate Certificate Program

Timothy Bralower
535 Deike Building
University Park
Phone: 814-863-1240
Email: tjb26@psu.edu

EARTH SUSTAINABILITY (ETHSUS)

By the time current undergraduates send their children to college, Earth's population will have increased to more than eight billion people. Our climate will be warmer and characterized by more frequent extreme weather events including droughts. One or more major metropolitan areas in our increasingly crowded world will have experienced a devastating hurricane or typhoon, sea level rise will be inundating low-lying coastal cities along with whole island nations, energy resources will be less available and more expensive, clean drinking water will be more scarce, and it will be increasingly difficult to feed the global population. How we choose to plan for and attempt to mitigate these "grand challenges" will have consequences for individuals, nations, and our global socioeconomic and political systems.

The goal of the 12-credit Certificate Program in Earth Sustainability is to dramatically increase geoscience literacy of all undergraduate students, including the large majority that do not major in the geosciences, future K-12 teachers, and also those who are historically under-represented in the geosciences, such that they are better positioned to make sustainable decisions in their lives and as part of the broader society.

REQUIRED COURSES:

EARTH 103 (GN)
EARTH 104 (GN)
EARTH 107 (GN)
EARTH 111 (GN;US)

No Prerequisites Required.

Effective Date: Fall Semester 2015

Foundations of Business

Undergraduate Certificate Program

Ali Kara
206 Main Classroom Building
York, PA 17403
Phone: 717-771-4189
E-mail: axk19@psu.edu

Abington College, Altoona College, Berks College, Penn State Beaver, Penn State Brandywine, Penn State DuBois, Behrend College, Penn State Fayette, Penn State Greater Allegheny, Capital College, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Shenango, Penn State Schuylkill, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York

Foundations of Business (FDOBUS_UCT)

Introduction to core business concepts. Students develop communication, technical, and analytical skills needed for the contemporary business environment.

REQUIREMENTS FOR THE CERTIFICATE (13 credits)

REQUIRED COURSES

BA 241(2) and BA 242(2) or BA 243(4)
ECON 102(3) or ECON 104(3)
ENGL 15 and MIS 204(3)

Effective Semester: Spring 2018
Ending Semester: Spring

FINANACIAL ACCOUNTING

Undergraduate Certificate

Shirl Henry
111 Old Main
University Park, PA 16802
814-863-0327
sah43@psu.edu

Penn State Wilkes-Barre; Penn State Worthington Scranton

FINANCIAL ACCOUNTING (FINACC)

This six (6) credit certificate program is perfect for those individuals with exposure to and/or experience in bookkeeping, accounts receivable/payable and other accounting practices with no formal academic education. The program enhances the participant's knowledge in the accounting areas identified in the course descriptions and introduces them to general accounting software.

Admission Requirements:

Nondegree or degree status undergraduate students

PRESCRIBED COURSES

[ACCTG 151](#) Introductory Financial Accounting I (3)

[ACCTG 152](#) Introductory Financial Accounting II (3)

Effective Semester: Fall 2012

Financial Controllership

Undergraduate Certificate Program

Dr. Ashutosh Deshmukh
269 Burke
Penn State Erie
Phone: 814-898-6438
e-mail: avd1@psu.edu
Penn State Erie

Financial Controllership (FINCTL)

This certificate is designed to provide you with the skill sets to succeed in becoming a corporate accounting and financial management professional. Required coursework is aligned with topics covered by the Certified Management Accountant (CMA) examination. CMA certification demonstrates expertise in financial planning, analysis, control, decision support, and professional ethics. To earn an undergraduate certificate in Financial Controllership, a minimum of 15 credits is required.

*Note that 13 credits of prerequisites are required.

PRESCRIBED COURSES

ACCTG 340 - Cost Accounting
ACCTG 422 - Accounting Systems
ACCTG 426 - Financial Statement Analysis
FIN 420 - Investment and Portfolio Analysis
FIN 461 - Portfolio Management and Analysis

Prerequisites: ACCTG 211, ACCTG 305 or ACCTG 371, ACCTG 312; FIN 301

Effective Date: Fall Semester 2015

FINANCIAL PLANNING

Undergraduate Certificate Program

Rick Hedderick
Penn State Erie
281 Burke Center
5101 Jordan Road
Erie, PA 16563-1400
814-898-6435
RPH132@PSU.EDU

Penn State Erie, The Behrend College

FINANCIAL PLANNING (FINPLN)

This certificate provides an introduction to personal financial planning and includes the areas of insurance, taxes, investments, retirement planning and estate planning. 18 credits are required.

PRESCRIBED COURSES

ACCTG 310
FIN 330
FIN 420
FIN 430
FIN 450
FIN 491

Prerequisites Required:

FIN 301

Effective Semester: SPRING 2014

FINANCIAL RISK MANAGEMENT

Undergraduate Certificate Program

Greg Filbeck
281 Jack Burke Res Center
Penn State Erie
Phone: 814-898-6549
E-mail: mgf11@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

FINANCIAL RISK MANAGEMENT (FINRSK)

This certificate program is designed to prepare students for a career in risk management; and, for those interested, to gain exposure to topic that constitute the first part of the Financial Risk Manager (FRM) exam, sponsored by the Global Association of Risk Professionals (GARP). The FRM exam is the primary industry designation with over 20,000 candidates taking the exam twice a year. Students completing the certificate are prepared to pass the first part of this two-part exam. The certificate requires a total of 21 credit hours and can be completed concurrently with a Penn State Behrend degree or via continuing education. For more information please see <http://psbehrend.psu.edu/Academics/academic-programs/certificate-programs-1>

To earn an undergraduate certificate in FINANCIAL RISK MANAGEMENT, a minimum of 22 credits is required.

PRESCRIBED COURSES

STAT 200 OR SCM 200
STAT 301
STAT 462 OR ECON 485
FIN 301
FIN 420
FIN 427
FIN 461

Prerequisites Required.

Effective Date: Spring Semester 2011

Expiration Date:

Last Revised by the Department: 12/02/2011

BC BSCH

Financial Services Sales Certificate

Undergraduate Certificate Program

Greg Filbeck/Mary Beth Pinto
286 Burke
Penn State Erie
814-898-6549
email: mgf11@psu.edu

Penn State Behrend

Financial Services Sales Certificate (FNSRSL)

This certificate program is designed to prepare both current and returning students for a career in a sales position in the financial services industry. The certificate recognizes the need for a baseline knowledge in financial planning and various financial products, but also the importance of personal marketing and communication skills necessary to be successful within the industry. This certificate program requires a total of 15 credit hours and can be completed concurrently with a Penn State Behrend degree or via continuing education.

Required Courses

CAS 252: Business and Professional Communications
FIN 330: Personal Financial Planning
MKTG 410: Personal Selling

Choose one of the following two courses:

CAS 203: Interpersonal Communication
PSYCH 243: Introduction to Well-being and Positive Psychology

Choose one of the following three courses:

ECON 351: Money and Banking
FIN 409: Principles of Real Estate
FIN 420: Investments
FIN 450: Retirement Planning

Effective Semester: Fall 2013

German Studies

Undergraduate Certificate Program

Dr. Eva Kuttenberg
Penn State Erie, The Behrend College
4951 College Dr.
Erie, PA 16563
Phone: 814-898-6079
Fax: 814-898-6032
e-mail: euk1@psu.edu

German Studies (GERSC)

The 15 Credit German Studies Certificate offered at Penn State Behrend is designed for students who wish to specialize in interdisciplinary German Studies by acquiring advanced German language skills and taking courses in culture, film, history, literature, music, or politics of the German-speaking countries. In-depth knowledge of the German-speaking countries prepares students for a global workforce and careers in international business, engineering, finance, politics, or the sciences. Students must have a C or better in each certificate course.

Admission Requirements:

Students who have not reached the third level of German Language proficiency may need to take German 001 and 002 first.

List of Courses* Included in the Certificate:

Required language courses: 7-8 credit hours

GER 3 Intermediate German^[1]
GER 201 Conversation and Composition
OR GER 301 Intermediate Speaking and Listening

Choose 9 credit hours from a program approved list:

GER 100 German Culture and Civilization
GER 190 Twentieth-Century German Literature in English Translation
GER 189 German Film
GER 200 Contemporary German Culture
HIST 121 History of the Holocaust
HIST 143 History of Fascism and Nazism
HIST 144 The World at War: 1939-1945
HIST 427 Germany since 1860
MUSIC 5 An Introduction to Western Music
PLSC 20 Comparative Politics of Western Europe

Effective Date: Fall Semester 2015

GEOGRAPHIC INFORMATION SCIENCE

Undergraduate Certificate Program

Alan Maceachren
310 Walker Bldg.
University Park, PA 16802
Phone: 814-865-7491
E-mail: nub@psu.edu

GEOGRAPHIC INFORMATION SCIENCE (GIS UCT)

The 12-credit Geographic Information Science (GIS) certificate is aimed at students who wish to be current in geographical representation and geospatial analysis. Through courses for the GIS certificate, students will understand and know how to apply various GIS and geospatial analysis tools to represent, analyze, and advise on the geospatial dimensions of natural and social phenomena. Students will gain firsthand experience using the most up-to-date tools and techniques available in the field of GIS today. Areas of study include cartography, remote sensing, and geographic information systems. Learning Objectives: Describe the conceptual foundations on which geographic information science and systems are based; use geospatial tools to perform spatial analysis and mapping tasks; and create solutions to geographic problems using geographic information science and technology.

REQUIRED COURSES

GEOG 260(3)

Select 9 credits from: GEOG 361(3); GEOG 362(3); GEOG 363(3); GEOG 365(3)

NON-COURSE REQUIREMENTS

Per University policy, all credit courses for a certificate require a grade of 'C' or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.

Effective Date: Fall 2017

Honors Globalization: India

Undergraduate Certificate Program

University Park

Richard Stoller
10 Schreyer Honors College
Phone: 814-865-2060
Email: rjs27@psu.edu

Honors Globalization: India

The certificate represents completion of a six-credit sequence of honors coursework including spring and fall courses and a five-week summer program in India, plus an additional six credits of India-related coursework as verified by the Schreyer Honors College. Students who complete certificate requirements will achieve an integration of classroom and experiential learning about India and will acquire a framework for understanding that can be applied to other countries or regions.

Students must complete a Schreyer Honors College integrated program plus additional relevant coursework, for a minimum of 12 credits. Six credits of core courses include a three-credit interdisciplinary introduction to India, followed by one credit for the in-country experience, and a two-credit follow-up course. Six credits of additional courses may be India-specific courses, Hindi (or other Indian) language courses, or thematic or comparative courses with relevance to the region.

Effective Semester: Fall Semester 2013

GLOBAL AWARENESS

Undergraduate Certificate Program

John Gamble
170 Irvin Kochel Center
Penn State Erie
Phone: 814-898-6291
E-mail: jkg2@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

GLOBAL AWARENESS (GLBLBC)

The certificate gives students an appreciation of the world in which they will live and work. By introducing students first to the broad contours of the globalizing world and then adding more narrowly focused courses, the certificate will give students a sense of the diversity and complexity of the modern world. All 12 credits must be taken at Penn State; a C or higher is required in each course. Students taking a language can only apply the third level of proficiency when fulfilling the requirement. The third level of proficiency must be demonstrated through class work rather than by testing out of the class. In addition to the six required credits, students must complete six credits that focus on matters outside the United States.

To earn an undergraduate certificate in GLOBAL AWARENESS, a minimum of 12 credits is required.

PRESCRIBED COURSES

HIST 11
PLSC 14 OR PLSC 3

No Prerequisites Required.

Effective Date: Fall Semester 2010

Expiration Date:

Last Revised by the Department: 11/11/2011

BC H&SS

GEOSPATIAL BIG DATA ANALYTICS

Undergraduate Certificate Program

Alan Maceachren
310 Walker Bldg.
University Park, PA 16802
Phone: 814-865-7491
E-mail: nyb@psu.edu

GEOSPATIAL BIG DATA ANALYTICS (GSPBDA UCT)

Geospatial data are central to the challenges and opportunities for science and society that Big Data provide. Geospatial data derive from a rapidly expanding array of sources that include sensors (from satellites, to cameras and other sensing devices carried by UAVs, to distributed sensors monitoring energy consumption, pollution, traffic and more with smart cities), GPS enabled devices (in vehicles, smart phones, cameras, human wearable devices, and even ones small enough to mount on migrating songbirds), Citizen Science efforts producing volunteered geospatial data, address-linked public health and many other records, retail transactions, and location-linked social media posts. As geospatial data become more ubiquitous, big digital geospatial data has become an essential part of geographic analysis. The 12-credit Geospatial Big Data Analytics certificate is aimed at students who are seeking advanced data collection, processing, analysis, and communication knowledge and skills related to leveraging the growing array of geographically-linked big data. Courses for this certificate have prerequisites that are not included in requirements for the certificate; such prerequisites may be completed through the undergraduate Geographic Information Science certificate. Learning Objectives: Demonstrate an understanding of the breadth of methods and techniques available for handling large volumes of heterogeneous, rapidly-changing data; use multiple methods and techniques to conduct spatial analyses of big data and apply resulting analyses to problems within the student's own discipline.

REQUIRED COURSES

GEOG 365(3)

Select 9 additional credits, including at least 3 credits in Analytics and 3 credits in Big Data.

Analytics: GEOG 461(3); GEOG 464(3); GEOG 465(3); GEOG 485(3)

Big Data: GEOG 462(3); GEOG 463(3); GEOG 481(3)

NON-COURSE REQUIREMENTS

Per University policy, all credit courses for a certificate require a grade of 'C' or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.

Prerequisites not included in Geospatial Big Data Certificate:

GEOG 260: prerequisite for GEOG 361, 362, 363, 365

GEOG 361: prerequisite for GEOG 461

GEOG 362: prerequisite for GEOG 462, 481

GEOG 363: prerequisite for GEOG 463, 465

GEOG 364 or 300/400 level statistics course: prerequisite for GEOG 464

Effective Date: Fall 2017

HOLOCAUST AND GENOCIDE STUDIES

Undergraduate Certificate Program

Benjamin J. Schreier
103B Weaver Bldg.
University Park
Phone: 814-863-0146
e-mail: bjs44@psu.edu

University Park

HOLOCAUST AND GENOCIDE STUDIES (HLCST)

The goal of the Holocaust Studies certificate program is to provide students a wide-ranging and interdisciplinary foundation in the study of the Holocaust and related fields of genocide, anti-Semitism and prejudice, and historical trauma. The curriculum covers history, cultural studies, philosophy, literary and film criticism, ethics, and political science approaches. Candidates are required to take 12 credits from an approved list of courses.

PRESCRIBED COURSES

JST 121 or HIST 121
JST 128 or CMLIT 128 or ENGL 128
JST 143 or HIST 143
JST 205 or HIST 205
JST 409 or HIST 409
JST 426 or HIST 426
JST 439 or HIST 439
JST 450H or PLSC 450H
JST 478 or RLST 478

Effective Date: Summer 2015

HEALTHCARE INFORMATICS CERTIFICATE

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State DuBois, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Wilkes-Barre

HEALTHCARE INFORMATICS CERTIFICATE (HLTHIF)

The healthcare industry is moving towards the widespread use of digital records and electronic information transfer. This is resulting in a need for healthcare professionals to be knowledgeable in information technology and for information technology professionals at healthcare facilities to be more knowledgeable of the healthcare industry. Professionals in these two areas both need to understand the complexities of medical information being digitally stored and transferred. This 18 credit certificate program provides students with insight into both professional areas. Students may receive credit for previous coursework (up to 3 courses) upon academic review.

To earn an undergraduate certificate in HEALTHCARE INFORMATICS , a minimum of 18 credits is required.

PRESCRIBED COURSES

IST 110
IST 210
IST 220
HPA 101
HPA 332
HPA 470

No Prerequisites Required.

Effective Date: Fall Semester 2010

Expiration Date:

Last Revised by the Department: 11/17/2011

CC

HUMAN FACTORS

Undergraduate Certificate Program

Dr. Melanie Hetzel-Riggin
Penn State Behrend School of Humanities and Social Sciences
108 Turnbull Hall
mdh33@psu.edu
814-898-6949

Human Factors (HMFAC)

This 15 credit interdisciplinary certificate program is designed to prepare students with in-depth knowledge of the capabilities and limitations of people and the application of psychological concepts to the design and safety of products and services; including consumer goods, military products, interactive websites and games, and assistive technologies. This certificate requires that students take introductory psychology as well as the two human factors courses (9 credits). Students will also need to take 1 additional psychology course (3 credits), and one course (3 credits) outside of their major of study in order to foster the interdisciplinary nature of this certificate.

Admission Requirements

Completion of prerequisites for the required courses

PRESCRIBED COURSES

PSYCH 100
PSYCH 244
PSYCH 444

ADDITIONAL COURSES

Take one of the following courses:

PSYCH 253
PSYCH 256

Take one of the following courses (this course must be outside the student's major field of study):

EDSGN 100
PSYCH 221
SOC 5
STS 200
STS/PHIL 233

Effective Semester: Spring Semester 2013

HUMAN GEOGRAPHY

Undergraduate Certificate Program

Lorraine Dowler
302 Walker Bldg.
University Park, PA 16802
Phone: 814-865-3433
E-mail: lxd17@psu.edu

HUMAN GEOGRAPHY (HMNGEO UCT)

Human geography, the study of human interactions across space, is vital to helping students understand the world by locating their lives within and across space and place. This 12-credit certificate will engage students with contemporary national and global issues as they locate patterns and processes of human-created change in local, regional and global environments. Through courses for the certificate in human geography, students will understand and be able to articulate why location matters to agricultural land use, industrial development, and urban design; the reasons for population growth and international migration; the consequences of economic development; the impacts of technological innovation, communication and industrialization; and other aspects of human life such as struggles over political power and control of territory that amplifies the inequalities between developed and developing economies. Learning Objectives: Describe, analyze, and locate human relations and movements across and through space and place; recognize and discuss the geographical dimensions of varying social, cultural, political, historical, and economic conditions; and identify and analyze human use and/or human change of their environments locally, regionally and globally.

REQUIRED COURSES

GEOG 220(3)

Elective Courses (Choose 9 credits from the following): GEOG 320(3); GEOG 324(3); GEOG 326(3); GEOG 328(3); GEOG 421(3); GEOG 422(3); GEOG 423(3); GEOG 424(3); GEOG 424W(3); GEOG 425(3); GEOG 426(3); GEOG 427(3); GEOG 428(3); GEOG 428Y(3); GEOG 429(3)

NON-COURSE REQUIREMENTS

Per University policy, all credit courses for a certificate require a grade of 'C' or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.

Effective Date: Fall 2017

HOUSING

Undergraduate Certificate Program

Ali Memari
222 Sackett Bldg
University Park
Phone: 814-863-9788
E-mail: amm7@psu.edu

University Park

HOUSING (HOUSG)

This certificate program is designed to prepare students for a career in the housing industry. Students are required to take a set of complementary courses in the technology of housing, the development process, and the design and the delivery processes for housing. The minimum number of credits required is 12, with no less than six credits at the 400-level. For entrance into the certificate program, students must be at least 5th semester. The cumulative GPA considered for admission will be consistent with, or equivalent to, the GPA minimum of 2.0 for maintaining good academic standing. Students must earn a C grade or better in each of the four courses to continue with the certificate.

To earn an undergraduate certificate in HOUSING, a minimum of 12 credits is required.

PRESCRIBED COURSES

AE 470
CE 410 OR CE 542 OR AE 542 OR AE 432
OR BE 462 OR RM 303

Students must complete an application and choose an additional three courses from the following list: CE 410, CE/AE 542, AE 432, ABE 462, REST 301, REST 409. With the approval of the Hankin Chair, one housing-related course of at least 3 credits not included in the list of recommended additional courses (e.g., demographics, urban geography, social housing, etc.) can be substituted for one of the three additional courses. Student must be at least fifth semester standing. The cumulative GPA considered for admission will be consistent with, or equivalent to, the GPA minimum of 2.0 for maintaining good academic standing. Students must earn a C grade or better in each of the four courses to continue with the certificate.

Prerequisites Required.

Effective Date: Fall Semester 2004

Expiration Date:

Last Revised by the Department: 11/11/2011

ENCEE

HEALTH POLICY AND ADMINISTRATION

Undergraduate Certificate Program

Beverly Fahr
604 Donald H. Ford Bldg
University Park
Phone: 814-863-2859
E-mail: bqf2@psu.edu

University Park

HEALTH POLICY AND ADMINISTRATION (HPA)

This certificate program is designed to allow students switching into health care from another industry to continue their education, if they desire, through a major in Health Policy and Administration or a bachelor's degree in one of several fields at the university combined with a minor in Health Policy and Administration. Required courses: HPA 101, HPA 332 Take an additional 9 credits from: HPA 420, 447, 455, 460. Students taking HPA 447 must already have taken either RM 301 or FIN 100.

To earn an undergraduate certificate in HEALTH POLICY AND ADMINISTRATION, a minimum of 15 credits is required.

PRESCRIBED COURSES

HPA 101
HPA 332
HPA 420 OR HPA 447 OR HPA 455 OR HPA 460

No Prerequisites Required.

Effective Date: Spring Semester 2008

Expiration Date:

Last Revised by the Department: 11/14/2011

HH H P A

Health Science Professions Certificate I

Undergraduate Certificate Program

Dr. Norah Shultz
115A Sutherland Building
1600 Woodland Road
Abington, PA 19001
Telephone: 215-881-7877
Fax: 215-881-7317
Fax: 215-881-7317

Penn State Abington

Health Science Professions Certificate I (HTHSC1)

The educational pathway for many health science professions requires prerequisites to gain entry. The Health Science Professions I certificate program contains the courses necessary to meet several local schools' prerequisite requirements. The two-semester program consists of 12 courses (36-38 credits total).

PRESCRIBED COURSES

BIOL 141
BIOL 142
CHEM 110
CHEM 111 OR CHEM 101
PSYCH 100
SOC 1 OR SOC 5
ENGL 15
BIOL 129
NUTR 251
MICRB 106
MICRB 107
HDFS 129

Effective Date: Fall Semester 2012

INTRODUCTION TO BUSINESS MANAGEMENT

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State Wilkes-Barre

INTRODUCTION TO BUSINESS MANAGEMENT (IBMG2)

The introduction to business management certificate provides a strong foundation in core business areas (management, accounting, communications and technology).

To earn an undergraduate certificate in INTRODUCTION TO BUSINESS MANAGEMENT, a minimum of 16 credits is required.

PRESCRIBED COURSES

ACCTG 211 or FIN 100
CAS 100
ENGL 15
MGMT 100
MIS 103 OR MIS 204

No Prerequisites Required.

Effective Date: Summer 2010

Expiration Date:

Last Revised by the Department: 04/05/2012

CC CCBUS

INSTRUCTOR DEVELOPMENT FOR PROFESSIONALS

Undergraduate Certificate Program

Mark Threeton
301C Keller Building
University Park, PA 16802
Phone: 814-863-5361
Email: mdt177@psu.edu

University Park

ADVANCED INSTRUCTOR DEVELOPMENT FOR PROFESSIONALS

This certificate is designed for the adult learner who would like to gain knowledge of essential instructor development concepts. These adult learners may already possess a degree in an occupational discipline, but need to augment their knowledge and resumes to advance their careers with their current employer or transition into a new job. Adult learners taking this certificate may also be taking post-secondary credit courses for the first time.

To earn an undergraduate certificate in INSTRUCTOR DEVELOPMENT FOR PROFESSIONALS, a minimum of 9 credits is required.

Admission Requirements:

High school diploma and two years of work experience.

REQUIRED COURSES:

WFED 105
WFED 106
WFED 207

Effective Semester: Fall 2013

INTRODUCTION TO CORPORATE COMMUNICATION

Undergraduate Certificate Program

Jane Ashton
Director, Continuing Education
Penn State Wilkes-Barre
Phone: 570-675-9251
e-mail: jua12@psu.edu

Penn State Schuylkill
Penn State Wilkes-Barre
Penn State Worthington Scranton

INTRODUCTION TO CORPORATE COMMUNICATION (INTCOM)

The Introduction to Corporate Communication certificate program is designed for those considering a degree in the field. It is also applicable for those currently employed in the field without a formal credential. The certificate includes courses intended to develop understanding of the oral and written communication strategies that result in effective communication in a professional environment.

PRESCRIBED COURSES

CAS 100
CAS 100A
CAS 100B or
CAS 100C
COMM 100
MIS 204
ENGL 15
CAS 352

Effective Date: Summer 2015

INTERNATIONAL ENGINEERING

Undergraduate Certificate Program

Patrick Tunno
208 Hammond Bldg
University Park
Phone: 814-863-1654
E-mail: pjt130@engr.psu.edu

University Park

INTERNATIONAL ENGINEERING (INTEN)

This certificate program is designed to provide recognition for students who have gained a proficiency in the skills needed by engineers in a global economy. The requirements of the certificate fall into three categories: knowledge of global engineering and its professional and societal context, knowledge of language and culture, and participation in international experiences. All engineering students in good academic standing are eligible for admission to the program.

To earn an undergraduate certificate in INTERNATIONAL ENGINEERING, a minimum of 10 credits is required.

PRESCRIBED COURSES

Students must complete an application and successfully complete 3 credits of study in a second language, while a PSU student, at the 003 (third-semester) level or higher; 6 credits (typically two courses) of study in courses approved to meet the International Cultures requirement (IL) of General Education; and 1-3 credits and/or at least six weeks of approved study or workabroad, consisting of course work, internship, research, etc.

Prerequisites Required.

Effective Date: Fall Semester 2004

Expiration Date:

Last Revised by the Department: 11/11/2011

EN ENADM

INTRODUCTION TO REHABILITATION AND HUMAN SERVICES

Undergraduate Certificate Program

Jane Ashton
Director, Continuing Education
Penn States Wilkes-Barre
Phone: 570-675-9251
e-mail: jua12@psu.edu

Penn State Berks
Penn State Hazleton
Penn State Schuylkill
Penn State Wilkes-Barre
Penn State Worthington Scranton

INTRODUCTION TO REHABILITATION AND HUMAN SERVICES (INTRHS)

The Introduction to Rehabilitation and Human Services certificate is designed for individuals considering a degree and/or employment in the human services field. Courses provide foundation knowledge in the discipline and prepare students to transition to a baccalaureate degree in Rehabilitation and Human Services and/or seek entry-level employment with a human services organization. Certificate holders may work for agencies providing services to persons with physical, emotional, or mental disabilities. They may pursue employment in a variety of settings including rehabilitation centers, drug and alcohol programs, community mental health programs, intellectual disability programs, corrections systems, and hospitals. Courses include: Disability Culture, Adolescent Development, Intro to Psychology, and Intro to Sociology.

PRESCRIBED COURSES

RHS 100
HDFS 239
PSYCH 100
SOC 1

Effective Date: Summer 2015

International Science

Undergraduate Certificate Program

Paul Shaffner
112 Ritenour Building
814.865.5000
E-Mail: pxs913@psu.edu

University Park

International Science (INTSCI)

This certificate is intended to recognize students who spend significant time abroad during their undergraduate careers and who complete courses that allow them to acquire a more global perspective on the study of science. The certificate is intended to provide recognition for students who have developed a familiarity with science outside of the United States and who have experience with the regional cultural context of the host nation(s). Consultation with an academic adviser prior to studying abroad is strongly recommended to ensure course choices fulfill the requirements of the certificate. To earn an undergraduate certificate in INTERNATIONAL SCIENCE, a minimum of 12 credits is required. Students **MUST** earn a C or higher for all 12 credits. Students must fulfill the following requirements:

- a total of at least 6 weeks abroad on one or more Penn State-approved courses/programs
- 6 credits (typically two courses) abroad that are either Penn State Science courses taught abroad or courses that are granted equivalency in the College of Science at Penn State
- 6 credits (typically two courses) that directly relate to the host regions' cultures, histories, or languages. These supporting courses can be taken while abroad or in residence on a Penn State campus.

Students who have completed these requirements must submit an application to have the certificate added to their transcript here:

<http://science.psu.edu/cie/education-abroad/international-science-certificate>

Effective Semester: Fall 2014

INTERNATIONAL STUDIES

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State New Kensington, Penn State Shenango

INTERNATIONAL STUDIES (INTST)

Today's students, whatever their career path, will enter a workforce that's increasingly diverse. We need to prepare our students to respect non-American cultures and people so they gain an international outlook. The Certificate in IS is intended to provide students with a broad and deep understanding of this diverse world far beyond the General Ed requirements. Students will be better suited to face the challenges and enjoy the opportunities presented by others, both in and outside the United States, who come from a variety of nations and cultures. Students MUST earn a C or higher for all 12 credits. XXX497 Special topics, or Independent Study/Research 494/496 can be used to satisfy 400 level course, subject to approval by coordinator.

To earn an undergraduate certificate in INTERNATIONAL STUDIES, a minimum of 12 credits is required.

PRESCRIBED COURSES

INTST 100 or HIST 11
HIST 488 or INTST 497 or MGMT 461 or MKTG 445 or NURS 401
or NURS 464 or THEA 401
ANTH 8 or CMLIT 108 or CMLIT 184 or ENGL 194 or HIST 2 or HIST 121
or HIST 144 or HIST 173 or IB 303 or LING 1
or MUSIC 9 or PSYCH 232 or RLST 1
or RLST 4 or RLST 101 or SPAN 131 or SPAN 131Y
or PLSC 3 or PLSC 14

No Prerequisites Required.

Effective Date: Spring Semester 2011

Expiration Date:

Last Revised by the Department: 04/05/2012

CC CCBUS

INFORMATION SCIENCES AND TECHNOLOGY

Undergraduate Certificate Program

Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies, College of IST
332G Information Sciences and Technology Building
University Park
Phone: 814-863-3450
E-mail: mur13@psu.edu

World Campus, Penn State Hazleton

INFORMATION SCIENCES AND TECHNOLOGY (IST)

To earn an undergraduate certificate in INFORMATION SCIENCES AND TECHNOLOGY, a minimum of 12 credits is required.

PRESCRIBED COURSES

IST 110
IST 210
IST 220
IST 250

A grade of "C" or higher is required in all courses for the certificate; no course substitutions are permitted. Courses taken more than 10 years ago will not apply automatically towards completion of the certificate but instead will require review by the academic unit.

No Prerequisites Required.

Effective Date: Fall Semester 2006

Expiration Date:

Last Revised by the Department: 11/10/2011

IS INFST

INFORMATION TECHNOLOGY CONSULTING THEME TRACK

Undergraduate Certificate Program

Shelie Waite
104T Info Sci and Tech Bldg
University Park
Phone: 814-865-8947
E-mail: swaite@ist.psu.edu

University Park

INFORMATION TECHNOLOGY CONSULTING THEME TRACK (ITCTT)

To enhance knowledge and skills in IT consulting theory, methodologies, and best practices. IST has established a unique Information Technology Consulting (ITC) theme track. With a focus on providing real-world IT consulting experiences, this track prepares students for the dynamic and complex world of IT consulting. The ITC track requires students to complete: IST 302, IT Project Management; IST 443, IT Professional Services Theory and Practice; and IST 444, Advanced IT Professional Services.

To earn an undergraduate certificate in INFORMATION TECHNOLOGY CONSULTING THEME TRACK, a minimum of 9 credits is required.

PRESCRIBED COURSES

IST 302
IST 443
IST 444

No Prerequisites Required.

Effective Date: Fall Semester 2007

Expiration Date:

Last Revised by the Department: 11/10/2011

IS INFST

SPORTS JOURNALISM, JOHN CURLEY CENTER, COLLEGE OF COMMUNICATIONS

Undergraduate Certificate Program

Asst. Dean Jamey Perry
204 Carnegie Bldg
University Park
Phone: 814-865-1503
E-mail: jrp5@psu.edu

University Park

SPORTS JOURNALISM, JOHN CURLEY CENTER, COLLEGE OF COMMUNICATIONS (JCCSJ)

The program explores issues and trends through instruction, programming and research. The curriculum covers sports writing, sports broadcasting, sports information, sports ethics, sports media and society, sports industry, and sports and public policy. The Center emphasizes media-related internships. Students are encouraged to complete co-curricular work at the student-run newspaper, the campus radio and TV stations, and the Athletic Department. Students must earn a minimum of six credits from COMM 476, 477 and/or 478 and complete an on-campus sports media activity and/or internship. <http://comm.psu.edu/about/centers/john-curley-center-for-sports-journalism>

To earn an undergraduate certificate in SPORTS JOURNALISM, JOHN CURLEY CENTER, COLLEGE OF COMMUNICATIONS, a minimum of 6 credits is required.

PRESCRIBED COURSES

COMM 476 OR COMM 477 OR COMM 478

To complete the program, students must earn a minimum of six credits from COMM 476, 477 and/or 478 and complete an on-campus sports media activity (Daily Collegian, ComRado, WKPS-FM "The Lion," Intercollegiate Athletics, etc.) and/or on- or off-campus internships in sports media.

Prerequisites Required.

Effective Date: Fall Semester 2003

Expiration Date:

Last Revised by the Department: 02/16/2012

CM

JUSTICE, ETHICS, DIVERSITY IN SPACE

Undergraduate Certificate Program

Joshua Inwood
302 Walker Bldg.
University Park, PA 16802
Phone: 814-865-3433
E-mail: jfi6@psu.edu

Brian King
302 Walker Bldg.
University Park, PA 16802
Phone: 814-865-3433
E-mail: bhk2@psu.edu

JUSTICE, ETHICS, DIVERSITY IN SPACE (JEDIS UCT)

The 12-credit Justice, Ethics, Diversity in Space (JEDIS) certificate helps students to cultivate a diverse set of theoretical and methodological skills that geographers use to engage in a diverse and changing planet. Increasingly as students enter the workforce they will be challenged to not only interact with diverse populations, but will also have to understand the way diverse populations are impacted by a range of economic, political and environmental challenges. They will also need to be exposed to ethical frameworks that can be productively leveraged within non-academic environments. Students who undertake a JEDIS certificate will take courses across the broad spectrum of human geography and will cultivate the intellectual capacity to address issues of inequality and diversity from an ethically informed perspective. Learning Objectives: Recognize and respect diverse experiences and perspectives; apply ethical frameworks to challenging economic, political, and environmental challenges; and think critically about the multiple implications of human choices and practices.

REQUIRED COURSES

Select 3 credits from: GEOG 220(3); GEOG 230(3)

Select 9 credits from: GEOG 324(3); GEOG 328(3); GEOG 422(3); GEOG 425(3); GEOG 426(3); GEOG 428(3); GEOG 428Y(3); GEOG 433(3)

NON-COURSE REQUIREMENTS

Per University policy, all credit courses for a certificate require a grade of 'C' or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.

Effective Date: Fall 2017

Leadership for Engineers

Undergraduate Certificate Program

University College: Hazleton, Wilkes-Barre, Worthington Scranton

Leadership for Engineers (LDENGR)

This certificate is designed for engineers interested in learning leadership skills. It is a series of 8 undergraduate credits that emphasize leadership in organizations, leadership principles, and project management including the human resource component.

Prescribed Courses

ENGR 408, ENGR 409, ENGR 405

Effective Date: Fall 2015

Expiration Date:

LEGAL STUDIES

Undergraduate Certificate Program

Robert Speel
170 Irvin Kochel Center
Penn State Erie
Phone: 814-898-206
E-mail: rws15@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

LEGAL STUDIES (LEGST)

The Legal Studies certificate is intended for students who want to learn about some of the cases and legal processes they will study in law school. It is also intended for students who might wish to work as legal assistants or paralegals and wish to get some background in law and legal processes without attending law school. The certificate requires that students take three political science courses (nine credits) about law or the legal process and two more political science courses (six credits) in which court cases or legal processes are a significant component of course materials. Students can also take 12 credits from the law or legal process courses and 3 credits from the court cases or legal processes courses.

To earn an undergraduate certificate in LEGAL STUDIES, a minimum of 15 credits is required.

Legal Studies Core Courses

Take 9 credits in core courses from a program-approved list:

PLSC 471 American Constitutional Law 3 credits
PLSC 472 The American Legal Process 3 credits
PLSC 473 American Judicial Behavior 3 credits
PLSC 487 International Law and Organizations 3 credits

Legal Studies Supplementary Courses

Take 6 credits in supplementary courses from a program approved list*:

PLSC 110 Rights in America 3 credits
PLSC 123 Ethnic and Racial Politics 3 credits
PLSC 178 Organized Crime, Law, and Politics 3 credits
PLSC 419 The Bureaucratic State 3 credits
PLSC 480 Congress and the Presidency 3 credits
PLSC 482 American State and Urban Politics 3 credits

* Students can also take 12 credits from the core courses and 3 credits from the list of supplementary courses.

Effective Date: Spring Semester 2011

Expiration Date:

Last Revised by the Department: 12/02/2011

BC H&SS

LANDSCAPE ECOLOGY

Undergraduate Certificate Program

Erica Smithwick
302 Walker Bldg.
University Park, PA 16802
Phone: 814-865-6693
E-mail: eus17@psu.edu

LANDSCAPE ECOLOGY (LNSECO UCT)

Landscape ecologists are in increasing demand in the areas of conservation management, urban planning, and earth system science. Landscape-level management also increasingly depends on an understanding of coupled natural-human systems, and landscape ecologists need to be trained to understand interdisciplinary linkages between social and ecological sciences, which is a strength in geographic thought. This 12-credit certificate provides training necessary to make inference about ecological dynamics at landscape scales through training in spatial analysis, environmental modeling, and geographically relevant ecosystem processes. Learning Objectives: Apply techniques of spatial analysis and environmental modeling to complex socio-ecological landscape systems; draw from social and ecological sciences to address challenges in coupled natural-human systems; and apply these tools for landscape-level management of human-environment processes.

REQUIRED COURSES

GEOG 210(3), GEOG 314(3), GEOG 414(3)
Select 3 credits from: GEOG 362(3); GEOG 365(3); GEOG 430(3); GEOG 431(3); GEOG 465(3)

Some "additional" course selections have prerequisites not included in the certificate: GEOG 160 or 260 is prerequisite for GEOG 362 and 365; GEOG 363 is prerequisite for GEOG 465.

NON-COURSE REQUIREMENTS

Per University policy, all credit courses for a certificate require a grade of 'C' or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.

Effective Date: Fall 2017

LABOR STUDIES AND EMPLOYMENT RELATIONS

Undergraduate Certificate Program

Robin Robinson
101 Sparks Bldg
University Park
Phone: 814-863-3870
E-mail: rmb3@psu.edu

Abington College, Altoona College, Penn State Brandywine, Penn State DuBois, Penn State Lehigh Valley, University Park, World Campus

LABOR STUDIES AND EMPLOYMENT RELATIONS (LSER)

Penn State's online certificate in labor studies and employment relations can prepare you for a leadership position in trade unions, employer organizations, or government. The program focuses on the relationship between employees and employers, and the many issues that influence their relationship. You will study a range of subjects including employment law, collective bargaining, and workplace diversity.

To earn an undergraduate certificate in LABOR STUDIES AND EMPLOYMENT RELATIONS, a minimum of 12 credits is required.

PRESCRIBED COURSES

LER 100
LER 201
CRIM 482 OR LER 136 OR LER 434 OR LER 435

Student may take CRIM 482 or LER 136 or LER 434 or LER 435 or PSYCH 485.

No Prerequisites Required.

Effective Date: Fall Semester 2000

Expiration Date:

Last Revised by the Department: 02/16/2012

LA LER

MEDICAL PLASTICS

Undergraduate Certificate Program

Jason Williams
School of Engineering
Penn State Erie
Phone: 814-898-6142
E-mail: jlw109@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

MEDICAL PLASTICS (MEDPLS)

Plastics play a critical role in a growing medical industry. A significant portion of medical devices, prosthetics, implants, tools and packaging of devices and products are dependent on plastics. Many of products could not exist, or cost would be excessive, without plastics. Medical plastics is a subset of the larger plastics industry and represents a strong growth area. Medical plastics usage is expected to increase approximately 7% per year over at least the next five years. Medical plastics also represents a large opportunity for domestic plastics manufacturers as there is a general resistance to outsourcing this production due to concerns over the quality and safety of third-world suppliers.

To earn an undergraduate certificate in MEDICAL PLASTICS, a minimum of 14 credits is required.

PRESCRIBED COURSES

BECAUSE ECERT WILL NOT TAKE *97 COURSES UNDER COURSE REQUIREMENTS, THE FOLLOWING ARE THE COURSE REQUIREMENTS FOR THE MEDICAL PLASTICS CERTIFICATE: BISC 4--HUMAN BODY OR MICRB 106/107/ELEMENTARY MICROBIOLOGY AND PLET 397 MEDICAL PLASTICS INDUSTRY OVERVIEW (1 CR) PLET 497 PLASTICS PRODUCT DEVELOPMENT (3 CR) PLET 497 MEDICAL PRODUCT DEVELOPMENT (1 CR) PLET 497 ADVANCED MATERIALS IN MEDICAL APPLICATIONS (3 CR) PLET 497 MEDICAL MANUFACTURING METHODS (3 CR)

Prerequisites Required.

Effective Date: Spring Semester 2010

Expiration Date:

Last Revised by the Department: 11/11/2011

BCSEET

MEDICAL SCIENCES

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State Brandywine

MEDICAL SCIENCES (MEDSCI)

The medical sciences certificate program is a one-year program designed for a select group of academically talented, highly motivated college graduates who do not have a science background. Courses are offered in a fixed-sequence, and students progress through as a part of a cohort. Students will work in a blended learning environment the majority of coursework will be completed through the Internet and self-study and come to the Penn State Delaware County campus approximately twice a month for laboratory work and exams. Upon completion, students will have the required science coursework to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician

To earn an undergraduate certificate in MEDICAL SCIENCES, a minimum of 39 credits is required.

PRESCRIBED COURSES

BIOL 110
BIOL 141
BIOL 142
BIOL 230W
CHEM 110
CHEM 111
CHEM 112
CHEM 113
CHEM 210
CHEM 212
CHEM 213
CHEM 472
PHYS 250
PHYS 251

Prerequisites Required.

Effective Date: Spring Semester 2007

Expiration Date:

Last Revised by the Department: 11/15/2011

CC

MANUFACTURING ENGINEERING TECHNOLOGY I

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State York

MANUFACTURING ENGINEERING TECHNOLOGY I (METCI)

This series of engineering courses is designed for the working adult who would like to augment their knowledge in the workplace with practical engineering courses. This certificate is designed to teach critical skills and knowledge needed to function effectively in today's manufacturing workplace. It is recommended that participants take the following classes in order.

To earn an undergraduate certificate in MANUFACTURING ENGINEERING TECHNOLOGY I, a minimum of 15 credits is required.

PRESCRIBED COURSES

EDSGN 100
EGT 114
IET 215
IET 216
MATH 4 OR MATH 21 OR MATH 22
IET 101

No Prerequisites Required.

Effective Date: Fall Semester 2008

Expiration Date:

Last Revised by the Department: 11/15/2011

CC CCSSE

Mining Technology

Undergraduate Certificate Program

University College: Fayette

Mining Technology (MNG T)

To provide a comprehensive academic, cultural and business focused Mining Technology Certificate Program.

Prescribed Courses

MNGT 100, MNG 230, MNGT 214, MNG 223, MNGT 204, MNGT 205W, MNGT 211

Effective Date: Summer 2016

Expiration Date:

NANOTECHNOLOGY

Undergraduate Certificate Program

Stephen Fonash
112 Lubert Bldg
University Park
Phone: 814-865-4931
E-mail: sjf2@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York, University Park, World Campus

NANOTECHNOLOGY (NANO)

Stephen Fonash, E S M, sjf2@psu.edu, 865-4931 The primary goal of the program is to offer students and incumbent workers worldwide the opportunity to earn this 18-credit certificate, which will be available only online. All candidates are required to successfully complete the required courses.

To earn an undergraduate certificate in NANOTECHNOLOGY, a minimum of 18 credits is required.

PRESCRIBED COURSES

ESC 211
ESC 212
ESC 213
ESC 214
ESC 215
ESC 216

Prerequisites Required.

Effective Date: Fall Semester 2000

Expiration Date:

Last Revised by the Department: 02/15/2012

EN ESC&M

.NET PROGRAMMING (MS)

Undergraduate Certificate Program

Nora Shultz
115 Sutherland Bldg
Penn State Abington
Phone: 215-881-7877
E-mail: nus19@psu.edu

Abington College

.NET PROGRAMMING (MS) (NET)

This certificate is a 5 credit (3 course) certificate in .NET Programming that meets the needs of programmers who seek to learn to develop .NET applications. This Program also will appeal to those with experience developing .NET applications. The .NET Certificate program covers a variety of areas, from C# application development and aspects of the .NET object hierarchy to database application development with Visual Basic .NET using ADO .NET. Students who take advantage of the program will acquire significant hands-on experience with XML and XSLT. In each course, students will complete between 3-5 individual projects. The last course includes a master group project. Eva B. Klein (ebz1)-215-881-7387

To earn an undergraduate certificate in .NET PROGRAMMING (MS), a minimum of 5 credits is required.

PRESCRIBED COURSES

CMPSC 297
CMPSC 297
CMPSC 297

Courses are 3 courses (totally 5 credits) that are all CMPSC 297 special topics. Suffix alphas will change each semester. Course titles are: Developing .NET Solutions with Visual Basic .NET (1 credit), Developing .NET Solutions with C# (1 credit), ASP.NET MVC & ADO.NET Including LINQ (3 credits)

No Prerequisites Required.

Effective Date: Spring Semester 2011

Expiration Date:

Last Revised by the Department: 12/20/2011

AB ABADM

NATIONAL SECURITY AGENCY

Undergraduate Certificate Program

Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies, College of IST
332G Information Sciences and Technology Building
University Park
Phone: 814-863-3450
E-mail: mur13@psu.edu

University Park, Altoona, Berks, Harrisburg, World Campus

National Security Agency (NSA)

The NSA certificate indicates students have completed the courses representing the required knowledge units as specified by the National Security Agency and the Department of Homeland Security for Professionals in Information Assurance and Cyber-Defense as part of Penn State's designation as a Center of Academic Excellence.

To earn an undergraduate certificate in NSA, a minimum of 28 credits is required.

A grade of "C" or higher is required in all courses for the certificate; no course substitutions are permitted. Courses taken more than 10 years ago will not apply automatically towards completion of the certificate but instead will require review by the academic unit.

Admission Requirements:

Must be enrolled in ISTBS, SRA, SRAAL, SRABL or SRACA major.

List of Courses* Included in the Certificate:

IST 140 (3) or CMPSC 101 (3)

IST 210 (3)

IST 220 (3)

IST 451 (3)

IST 454 (3)

IST 456 (3)

SRA 111 (3)

SRA 221 (3)

STAT 200 (4)

Effective Semester: Spring 2015

Expiration Date:

NURSING FORENSICS

Undergraduate Certificate Program

Abington College, Altoona College, Behrend College, Capital College, Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Great Valley, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York, University Park, World Campus

NURSING Forensics (NURFRC)

This 12-credit certificate introduces students to forensic health sciences, forensic nursing, and the nursing role in the scientific investigation of violence. Through this course series, nurses gain foundational forensics knowledge and skills, including evidence collection and preservation; forensic documentation; recognition of domestic violence, assault, and stalking; related public policy and regulatory guidelines; and legal and ethical issues. This program prepares nurses to provide care that is more specialized for victims and perpetrators of physical, psychological, and social violence or abuse.

To earn an undergraduate certificate in Nursing FORENSICS, a minimum of 12 credits is required

PRESCRIBED COURSES

NURS 245 Violence and the Impact on Society (3)

NURS 409 Introduction to Forensic Nursing (3)

NURS 410 Forensic Evidence Collection and Preservation (3)

NURS 411 Seminar in Forensic Nursing (3)

Total Credits: 12

Prerequisites Required.

NURSING INFORMATICS

Undergraduate Certificate Program

Madeline Mattern
204 HHD East
University Park
Phone: 814-865-8469
E-mail: mfm107@psu.edu

Abington College, Altoona College, Behrend College, Capital College, Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Great Valley, Penn State Greater Allegheny, Penn State Hazleton, Penn State Lehigh Valley, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York, University Park, World Campus

NURSING INFORMATICS (NURINF)

This 9-credit course series is designed to provide nurses with informatics knowledge and to prepare them to practice in information and technology rich health care environments. Those who complete the certificate will be prepared to assist in the implementation of informatics tools in healthcare environments such as electronic health records, clinical decision support tools, database management and data mining, patient safety technologies such as Bar Code Medication Administration (BCMA), RFID technologies and smart pumps. The ethical management of private health information and legislative aspects such as HIPAA and the HITECH act are also included.

To earn an undergraduate certificate in NURSING INFORMATICS, a minimum of 9 credits is required.

PRESCRIBED COURSES

NURS 357
NURS 458
NURS 460

Prerequisites Required.

Effective Date: Spring Semester 2011

Expiration Date:

Last Revised by the Department: 02/03/2012

NR 2NURS

NURSING MANAGEMENT

Undergraduate Certificate Program

Madeline Mattern
204 HHD East
University Park
Phone: 814-865-8469
E-mail: mfm107@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park, World Campus

NURSING MANAGEMENT (NURMGT)

The Nursing Management Certificate Program includes a series of four three-credit courses designed to enhance the career opportunities for currently licensed RNs who are working in nursing. This program is designed for registered nurses who have, or aspire to hold, entry level nurse manager positions. The program will enrich participants' knowledge of basic health care organizations and administration; collection, analysis and management of nursing data; concepts and techniques for managing nursing personnel; and concepts and techniques for enhancing nursing managerial behaviors. Courses are aligned with the core curriculum and competencies for nurse managers, developed by the American Organization of Nurse Executives.

To earn an undergraduate certificate in NURSING MANAGEMENT, a minimum of 12 credits is required.

PRESCRIBED COURSES

NURS 430
NURS 431
NURS 432
NURS 433

Prerequisites Required.

Effective Date: Spring Semester 2005

Expiration Date:

Last Revised by the Department: 11/10/2011

NR *A

OPERATIONAL EXCELLENCE FOR PROFESSIONALS

Undergraduate Certificate Program

Mark Threeton
301C Keller Building
University Park, PA 16802
Phone: 814-863-5361
Email: mdt177@psu.edu

University Park

OPERATIONAL EXCELLENCE FOR PROFESSIONALS (OEPF)

This certificate is designed for the adult learner who would like to gain knowledge of essential supervisory leadership concepts. These adult learners may already possess a degree in an occupational discipline, but need to augment their knowledge and resumes to advance their careers with their current employer or transition into a new job. Adult learners taking this certificate may also be taking post-secondary credit courses for the first time.

To earn an undergraduate certificate in OPERATIONAL EXCELLENCE FOR PROFESSIONALS, a minimum of 9 credits is required.

Admission Requirements:

High school diploma and two years of work experience.

REQUIRED COURSES:

WFED 451
WFED 410
WFED 405

Effective Semester: Fall 2013

ORGANIZATIONAL COMMUNICATION

Undergraduate Certificate Program

Matthew David Lamb
307 Sparks Bldg
University Park
Phone: 814-865-7751
E-mail: mdl20@psu.edu

Penn State Lehigh Valley, University Park, World Campus

ORGANIZATIONAL COMMUNICATION (ORCOM)

This program can help you improve internal and external communication in the context of your current position or prepare you to move into a new career as a communications professional. Because the curriculum focuses on research-based skills that go beyond mere technical expertise with presentation software, the practical insights presented in this program will hold their value throughout your career. Required Courses (6 credits) CAS 283 Communication and Information Technology I (3 credits) CAS 352 Organizational Communication (3 credits) Elective Courses (choose 6 credits from the following) CAS 404; CAS 452; CAS 475; ENGL 419 (3 crs. each)

To earn an undergraduate certificate in ORGANIZATIONAL COMMUNICATION, a minimum of 12 credits is required.

PRESCRIBED COURSES

CAS 283
CAS 352
CAS 404 OR CAS 452 OR CAS 475 OR ENGL 419

No Prerequisites Required.

Effective Date: Spring Semester 2005

Expiration Date:

Last Revised by the Department: 11/07/2011

LA CASBL

PREMEDICAL BASIC SCIENCES

Undergraduate Certificate Program

Mildred Rodriguez
213 Whitmore Lab
University Park
Phone: 814-865-7620
E-mail: mxr22@psu.edu

University Park

PREMEDICAL BASIC SCIENCES (PHYAST)

The premedical certificate program is a non-degree program for academically talented, highly motivated college graduates who do not have a science background. In 15-24 months, students can complete the undergraduate science course work required to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician assistant, nursing, and other allied health schools. Scheduling courses in the program is flexible and students who need to work may enroll part-time (students may be exempt from completing some credits based on prior undergraduate course work). All courses must be completed with a C grade or better, 24 credits need to be completed to receive the certificate.

To earn an undergraduate certificate in PREMEDICAL BASIC SCIENCES, a minimum of 32 credits is required.

PRESCRIBED COURSES

BIOL 110
BIOL 230W OR BIOL 240W
BIOL 141
BIOL 142
BIOL 129
CHEM 110
CHEM 111
CHEM 112
CHEM 113
SC 401
MICRB 106 OR MICRB 201
MICRB 107 OR MICRB 202
STAT 200 OR STAT 250

Admission Requirements:

- 1) a degree in a non-life science major from a U.S. accredited university/college
- 2) GPA >3.0
- 3) min. SAT score of 1100 (Math/Verb, no score being lower than 500), or a min. ACT composite score of 24, or a min. GRE score of 1100 (Verb/Quant, no score being lower than 500, for new GRE the Verb/Quant scores need to be >150 and Analy score needs to be >3)
- 4) volunteer experience in community or health care setting. Students who completed >3 of the required science courses are not eligible (science courses taken at other colleges will be evaluated for content before being accepted towards completion of the program). The program is not for students who have a science background wanting to bolster their science GPA.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 12/19/2011

SC

PHYSICAL GEOGRAPHY

Undergraduate Certificate Program

Alan H. Taylory
302 Walker Bldg.
University Park, PA 16802
Phone: 814-865-3433
E-mail: aht1@psu.edu

PHYSICAL GEOGRAPHY (PHYGEO UCT)

Physical geographers study Earth's physical environment and its interactions with human activities across spatial and temporal scales. Through courses for the 12-credit certificate in physical geography, students will understand and be able to articulate the geographic patterns and physical processes attending Earth's climate and landscape systems, including its hydrology, landforms, soils, and vegetation, along with the evidence for and impacts of past and contemporary environmental changes. Learning Objectives: Identify, describe, and analyze the processes that lead to spatial variation on Earth's surface, and the current and historical, physical and biotic processes that shape specific landscapes.

REQUIRED COURSES

GEOG 210(3)

Select 9 credits from: GEOG 310(3); GEOG 310W(3); GEOG 314(3); GEOG 315(3); GEOG 410(3); GEOG 411(3); GEOG 411W(3); GEOG 412(3); GEOG 414(3); GEOG 431(3); GEOG 438(3)

NON-COURSE REQUIREMENTS

Per University policy, all credit courses for a certificate require a grade of 'C' or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.

Effective Date: Fall 2017

PREMEDICAL BASIC SCIENCES

Undergraduate Certificate Program

Mildred Rodriguez
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University Park
Phone: 814-865-7620
E-mail: mxr22@psu.edu

University Park

PREMEDICAL BASIC SCIENCES (PHYTHE)

The premedical certificate program is a non-degree program for academically talented, highly motivated college graduates who do not have a science background. In 15-24 months, students can complete the undergraduate science course work required to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician assistant, nursing, and other allied health schools. Scheduling courses in the program is flexible and students who need to work may enroll part-time (students may be exempt from completing some credits based on prior undergraduate course work). All courses must be completed with a C grade or better, 24 credits need to be completed to receive the certificate.

To earn an undergraduate certificate in PREMEDICAL BASIC SCIENCES, a minimum of 37 credits is required.

PRESCRIBED COURSES

BIOL 110
BIOL 230W OR BIOL 240W OR BIOL 220W
BIOL 141
BIOL 142
BIOL 129
CHEM 110 OR CHEM 210
CHEM 111 OR CHEM 212
CHEM 112 OR CHEM 213
CHEM 113
PHYS 250
PHYS 251
SC 201
SC 401
STAT 200 OR STAT 250

Prerequisites Required.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 12/19/2011

SC

PROJECT MANAGEMENT CERTIFICATE

Undergraduate Certificate Program

Norah Peters Shultz
115 Sutherland Bldg
Penn State Abington
Phone: 215-881-7877
E-mail: nus19@psu.edu

Abington College

PROJECT MANAGEMENT CERTIFICATE (PJMGT)

This 4 credit certificate program covers the essential concepts, skills and techniques necessary in managing projects in the business world. The certificate is set up around a group project that is worked on throughout the program. Students gain real-time experience in the challenges of creating a unified team, solving problems, tracking their projects, and presenting a final paper and presentation on the process. Contact information: Randolph Ingbritsen, 215-881-7405, rxi3@psu.edu

To earn an undergraduate certificate in PROJECT MANAGEMENT, a minimum of 4 credits is required.

PRESCRIBED COURSES

BA 297
BA 297
BA 297
BA 297

Courses are four (4) one-credit BA 297 special topics. Suffix alphas will change from semester to semester. Course titles are: Project Initiation and Planning, Project Scheduling and Integration, Project Costing and Control, Project Risk and Change Management

No Prerequisites Required.

Effective Date: Spring Semester 2011

Expiration Date:

Last Revised by the Department: 12/13/2011

AB ABADM

PRESIDENTIAL LEADERSHIP ACADEMY CERTIFICATE PROGRAM

Undergraduate Certificate Program

Melissa Doberstein
1 Leadership Academy
Atherton Hall, University Park
Phone: 814-863-4589
E-mail: mts13@psu.edu

University Park

PRESIDENTIAL LEADERSHIP ACADEMY CERTIFICATE PROGRAM (PLA)

The goal of the program is to prepare students to develop leadership fundamentals to thrive in an environment in which multiple dimensions of an issue are explored, diverse viewpoints are heard, and a fully informed and respectful discourse that leads to sound action. The opportunities available will lead to further development of critical thinking abilities necessary for leaders to implement decisions with sensitivity to the circumstances that led them there. Students will develop the ability to rethink decisions and even change course along the way. All students are required to take 10 credits, seven through the Presidential Leadership Academy and three credits outside the academy. Courses must be at the 300 level or above.

To earn an undergraduate certificate in PRESIDENTIAL LEADERSHIP ACADEMY PROGRAM, a minimum of 7 credits is required.

PRESCRIBED COURSES

HONOR 201
HONOR 301
HONOR 401

Bloggging, Students must blog once a week throughout their time in the Presidential Leadership Academy analyzing an issue using the critical thinking skills developed in the courses. Field Trip Experiences, Students must participate in at least three field experiences. Trips planned annually by the Academy which will give students a broader perspective on social and political issues.

Prerequisites Required.

Effective Date: Fall Semester 2009

Expiration Date:

Last Revised by the Department: 03/30/2012

IC

Plastics Processing

Undergraduate Certificate Program

Brad Johnson
Penn State Behrend
Phone: 814-898-6148
Email: bgj1@psu.edu

Penn State Erie, The Behrend College

Plastics Processing (PLSPR)

This 16-17 credit program is designed to provide students with an understanding of the basics of the materials and processes used to produce plastic parts. Students learn modern processing techniques and testing methods for plastics

PLET 50(2) or MET 107(3) or EDSGN 100S(3) or EDSGN 100(3)
PLET 205(3)
PLET 206(3)
PLET 222(4)
PLET 227(4)

Effective Semester: Spring 2014

PREMEDICAL SCIENCES

Undergraduate Certificate Program

Michael Campbell
001 Prischak Bldg
Penn State Erie
Phone: 814-898-6474
E-mail: mac17@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

PREMEDICAL SCIENCES (PMEDBC)

Non-degree program designed for academically talented, highly motivated individuals who do not have a science background. In 15-24 months students can complete science coursework required to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician assistant or other allied health schools. Program consists of 40-42 credits of science courses.

To earn an undergraduate certificate in PREMEDICAL SCIENCES, a minimum of 42 credits is required.

PRESCRIBED COURSES

BIOL 110
BIOL 230W
BIOL 141
BIOL 142
CHEM 110
CHEM 111
CHEM 112
CHEM 113
CHEM 210
CHEM 212
CHEM 213
PHYS 250
PHYS 251
SC 201

IN ADDITION TO PREVIOUS COURSES HEALTH PROFESSIONS RELATED COURSES SELECTED IN CONSULTATION WITH AN ADVISER (3-5 CREDITS)

Prerequisites Required.

Effective Date: Spring Semester 2010

Expiration Date:

Last Revised by the Department: 11/11/2011

BC SCIAB

PUBLIC RELATIONS

Undergraduate Certificate Program

Rodney Troester
170 Irvin Kochel Center
Penn State Erie
Phone: 814-898-6442
E-mail: rlt5@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

PUBLIC RELATIONS (PR BC)

The Certificate in Public Relations offered at Penn State Behrend is designed for communication and business majors who wish to focus their supporting or non-business supporting coursework in a specific professional communication area. The certificate is also designed for working professionals interested in developing their skill-set in public relations. The foundation of the certificate is developed in the Media Writing, Introduction to Public Relations, and Public Relations Media and Methods courses. Students are then allowed to choose one additional advanced course to complete the 12 required hours.

To earn an undergraduate certificate in PUBLIC RELATIONS, a minimum of 12 credits is required.

PRESCRIBED COURSES

COMM 315
COMM 370
COMM 471
COMM 472 OR COMM 473

No Prerequisites Required.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 11/11/2011

BC H&SS

PREMEDICAL BASIC SCIENCES

Undergraduate Certificate Program

Mildred Rodriguez
213 Whitmore Lab
University Park
Phone: 814-865-7620
E-mail: mxr22@psu.edu

University Park

PREMEDICAL BASIC SCIENCES (PREDEEN)

The premedical certificate program is a non-degree program for academically talented, highly motivated college graduates who do not have a science background. In 15-24 months, students can complete the undergraduate science course work required to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician assistant, nursing, and other allied health schools. Scheduling courses in the program is flexible and students who need to work may enroll part-time (students may be exempt from completing some credits based on prior undergraduate course work). All courses must be completed with a C grade or better, 24 credits need to be completed to receive the certificate.

To earn an undergraduate certificate in PREMEDICAL BASIC SCIENCES, a minimum of 37 credits is required.

PRESCRIBED COURSES

BIOL 110
BIOL 230W OR BIOL 240W OR BIOL 220W
BIOL 141
CHEM 110
CHEM 111
CHEM 112
CHEM 113
CHEM 210
CHEM 212
CHEM 213
PHYS 250
PHYS 251
PHYS 250
PHYS 251
SC 201
SC 401

Admission Requirements:

- 1) a degree in a non-life science major from a U.S. accredited university/college
- 2) GPA >3.0
- 3) min. SAT score of 1100 (Math/Verb, no score being lower than 500), or a min. ACT composite score of 24, or a min. GRE score of 1100 (Verb/Quant, no score being lower than 500, for new GRE the Verb/Quant scores need to be >150 and Analy score needs to be >3)
- 4) volunteer experience in community or health care setting. Students who completed >3 of the required science courses are not eligible (science courses taken at other colleges will be evaluated for content before being accepted towards completion of the program). The program is not for students who have a science background wanting to bolster their science GPA.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 12/19/2011

SC

PREMEDICAL BASIC SCIENCES**Undergraduate Certificate Program**

Mildred Rodriguez
 213 Whitmore Lab
 University Park
 Phone: 814-865-7620
 E-mail: mxr22@psu.edu

University Park

PREMEDICAL BASIC SCIENCES (PREMED)

The premedical certificate program is a non-degree program for academically talented, highly motivated college graduates who do not have a science background. In 15-24 months, students can complete the undergraduate science course work required to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician assistant, nursing and other allied health schools. Scheduling courses in the program is flexible and students who need to work may enroll part-time (students may be exempt from completing some credits based on prior undergraduate course work). All courses must be completed with a "C" grade or better, 24 credits need to be completed to receive the certificate.

To earn an undergraduate certificate in PREMEDICAL BASIC SCIENCES, a minimum of 37 credits is required.

PRESCRIBED COURSES

BIOL 110
 BIOL 141
 BIOL 230W OR BIOL 240W OR BIOL 220W
 CHEM 110
 CHEM 112
 CHEM 111
 CHEM 113
 CHEM 213
 CHEM 210
 CHEM 212
 PHYS 250 OR PHYS 250
 PHYS 250 OR PHYS 250
 SC 201
 SC 497 OR SC 401
 PHYS 251 OR PHYS 251
 PHYS 251 OR PHYS 251

SC 201 was previously offered as SC 297A in FA2010.

Admission Requirements:

- 1) a degree in a non-life science major from a U.S. accredited university/college
- 2) GPA >3.0
- 3) min. SAT score of 1100 (Math/Verb, no score being lower than 500), or a min. ACT composite score of 24, or a min. GRE score of 1100 (Verb/Quant, no score being lower than 500, for new GRE the Verb/Quant scores need to be >150 and Analy score needs to be >3)
- 4) volunteer experience in community or health care setting. Students who completed >3 of the required science courses are not eligible (science courses taken at other colleges will be evaluated for content before being accepted towards completion of the program). The program is not for students who have a science background wanting to bolster their science GPA.

Effective Date: Spring Semester 2005

Expiration Date:

Last Revised by the Department: 11/15/2011

SC

PREMEDICAL BASIC SCIENCES

Undergraduate Certificate Program

Mildred Rodriguez
213 Whitmore Lab
University Park
Phone: 814-865-7620
E-mail: mxr22@psu.edu

University Park

PREMEDICAL BASIC SCIENCES (PRENUR)

The premedical certificate program is a non-degree program for academically talented, highly motivated college graduates who do not have a science background. In 15-24 months, students can complete the undergraduate science course work required to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician assistant, nursing, and other allied health schools. Scheduling courses in the program is flexible and students who need to work may enroll part-time (students may be exempt from completing some credits based on prior undergraduate course work). All courses must be completed with a C grade or better, 24 credits need to be completed to receive the certificate.

To earn an undergraduate certificate in PREMEDICAL BASIC SCIENCES, a minimum of 29 credits is required.

PRESCRIBED COURSES

BIOL 129
BIOL 141
BIOL 142
CHEM 110 OR CHEM 101
CHEM 111
MICRB 106 OR MICRB 201
MICRB 107 OR MICRB 202
STAT 200 OR STAT 250
NUTR 100 OR NUTR 251
PSYCH 100

Admission Requirements:

- 1) a degree in a non-life science major from a U.S. accredited university/college
- 2) GPA >3.0
- 3) min. SAT score of 1100 (Math/Verb, no score being lower than 500), or a min. ACT composite score of 24, or a min. GRE score of 1100 (Verb/Quant, no score being lower than 500, for new GRE the Verb/Quant scores need to be >150 and Analy score needs to be >3)
- 4) volunteer experience in community or health care setting. Students who completed >3 of the required science courses are not eligible (science courses taken at other colleges will be evaluated for content before being accepted towards completion of the program). The program is not for students who have a science background wanting to bolster their science GPA.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 04/02/2012

SC

PREMEDICAL BASIC SCIENCES

Undergraduate Certificate Program

Mildred Rodriguez
213 Whitmore Lab
University Park
Phone: 814-865-7620
E-mail: mxr22@psu.edu

University Park

PREMEDICAL BASIC SCIENCES (PREOPT)

The premedical certificate program is a non-degree program for academically talented, highly motivated college graduates who do not have a science background. In 15-24 months, students can complete the undergraduate science course work required to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician assistant, nursing, and other allied health schools. Scheduling courses in the program is flexible and students who need to work may enroll part-time (students may be exempt from completing some credits based on prior undergraduate course work). All courses must be completed with a C grade or better, 24 credits need to be completed to receive the certificate.

To earn an undergraduate certificate in PREMEDICAL BASIC SCIENCES, a minimum of 41 credits is required.

PRESCRIBED COURSES

BIOL 110
BIOL 230W OR BIOL 240W OR BIOL 220W
BIOL 141
CHEM 110
CHEM 111
CHEM 112
CHEM 113
CHEM 210
CHEM 212
CHEM 213
PHYS 250
PHYS 250
PHYS 251
PHYS 251
SC 201
SC 401
MICRB 201
MICRB 202

Admission Requirements:

- 1) a degree in a non-life science major from a U.S. accredited university/college
- 2) GPA >3.0
- 3) min. SAT score of 1100 (Math/Verb, no score being lower than 500), or a min. ACT composite score of 24, or a min. GRE score of 1100 (Verb/Quant, no score being lower than 500, for new GRE the Verb/Quant scores need to be >150 and Analy score needs to be >3)
- 4) volunteer experience in community or health care setting. Students who completed >3 of the required science courses are not eligible (science courses taken at other colleges will be evaluated for content before being accepted towards completion of the program). The program is not for students who have a science background wanting to bolster their science GPA.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 12/19/2011

SC

PREMEDICAL BASIC SCIENCES

Undergraduate Certificate Program

Mildred Rodriguez
213 Whitmore Lab
University Park
Phone: 814-865-7620
E-mail: mxr22@psu.edu

University Park

PREMEDICAL BASIC SCIENCES (PREVET)

The premedical certificate program is a non-degree program for academically talented, highly motivated college graduates who do not have a science background. In 15-24 months, students can complete the undergraduate science course work required to apply for admission to medical, dental, optometry, veterinary science, podiatry, physical therapy, physician assistant, nursing, and other allied health schools. Scheduling courses in the program is flexible and students who need to work may enroll part-time (students may be exempt from completing some credits based on prior undergraduate course work). All courses must be completed with a C grade or better, 24 credits need to be completed to receive the certificate.

To earn an undergraduate certificate in PREMEDICAL BASIC SCIENCES, a minimum of 47 credits is required.

PRESCRIBED COURSES

BIOL 110
BIOL 230W OR BIOL 240W OR BIOL 220W
BIOL 141
CHEM 110
CHEM 111
CHEM 112
CHEM 113
CHEM 210
CHEM 212
CHEM 213
PHYS 250
PHYS 250
PHYS 251
PHYS 251
SC 201
SC 401
MICRB 201
MICRB 202
BMB 211 OR BMB 401
STAT 200 OR STAT 250

Admission Requirements:

- 1) a degree in a non-life science major from a U.S. accredited university/college
- 2) GPA >3.0
- 3) min. SAT score of 1100 (Math/Verb, no score being lower than 500), or a min. ACT composite score of 24, or a min. GRE score of 1100 (Verb/Quant, no score being lower than 500, for new GRE the Verb/Quant scores need to be >150 and Analy score needs to be >3)
- 4) volunteer experience in community or health care setting. Students who completed >3 of the required science courses are not eligible (science courses taken at other colleges will be evaluated for content before being accepted towards completion of the program). The program is not for students who have a science background wanting to bolster their science GPA.

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 12/19/2011

SC

PROFESSIONAL SALES

Undergraduate Certificate

Shirl Henry
111 Old main
University Park, PA 16802
814-863-0327
sah43@psu.edu

Penn State Wilkes-Barre; Penn State Worthington Scranton

PROFESSIONAL SALES (PROSAL)

This six (6) credit certificate program is perfect for those individuals interested in pursuing an occupation in sales or an existing sales representative that would like to receive a formal education to further their career. The participant will study the role of selling in the total marketing process including the concept of customer service.

Admission Requirements:

Nondegree or degree status undergraduate students

PRESCRIBED COURSES

COMM 120 **Advertising and Society** (3)
MKTG 220 **Introduction to Selling Techniques** (3)

Effective Semester: Fall 2012

INTRODUCTION TO PSYCHOLOGY

Undergraduate Certificate Program

Jane Ashton
Director, Continuing Education
Penn State Wilkes-Barre
Phone: 570-675-9251
e-mail: jua12@psu.edu

Penn States Wilkes-Barre
Penn State Worthington Scranton

INTRODUCTION TO PSYCHOLOGY (PSYC)

The Introduction to Psychology certificate program is designed for those interested in an overview of Psychology and/or considering a degree in the human services field. Certificate holders may transition to a baccalaureate degree in Psychology, or they may seek employment in a variety of settings, including rehabilitation centers, drug and alcohol programs, community mental health programs, intellectual disability programs, corrections systems, and hospitals. Courses include: Intro to Psychology, Development Psychology, and Abnormal Psychology.

PRESCRIBED COURSES

PSYCH 100
PSYCH 212
PSYCH 270

Effective Date: Summer 2015

REAL ESTATE ANALYSIS AND DEVELOPMENT

Undergraduate Certificate Program

Brent Ambrose
355 Business Bldg.
University Park, PA 16802
Phone: 814-865-4172
E-mail: bwa10@psu.edu

REAL ESTATE ANALYSIS AND DEVELOPMENT (RLESAD_UCT)

The Real Estate Analysis and Development (READ) certificate is designed to prepare students for a variety of careers in the real estate industry. It specifies coursework in advanced real estate analysis and investments. Students pursuing this certificate will be encouraged and better prepared to seek careers in commercial real estate development, analysis, investment, valuation, banking, and brokerage. They will be positioned to enter the financial management training programs of leading corporations. Strong demand exists from corporate recruiters for well-prepared graduates to enter these post-graduation training programs. READ Learning Goals - The learning objectives for the certificate in Real Estate Analysis and Development (READ) include: Communication Skills: Argue your point persuasively in written, oral, or presentation form. Problem Solving: Analyze complicated real estate financial issues using best tools, theories, and evidence, complemented by the ability to recommend solutions and implementation plans. Critical Thinking: Understand the economic and institutional framework underlying successful real estate projects and developments. Integrative Understanding: Integrate and coordinate teams across multiple disciplines including finance, marketing, management, accounting, economics, and law. Direct assessment will be embedded in selected instructional modules. Measures will be identified in various assignments, projects, and exams. Over a five-year period each objective will be measured at least twice. If early indications show a need for more frequent assessments, adjustments will be made. Program faculty serve as the assessment committee and meet at least once a year. Results are analyzed and plans for improvement in content and/or delivery will be implemented.

Admission Requirements

The READ certificate is only open to students enrolled in a Smeal College of Business major. The READ certificate is not open to students enrolled in the Risk Management - Real Estate major.

REQUIRED COURSES

RM 303(3), RM 450(3)
Select 3 credits from the following: RM 424(3); RM 460(3); RM 470(3)

NON-COURSE REQUIREMENTS

Extracurricular Activities - While not a READ requirement, students who enroll in the certificate are encouraged to participate in the extra-curricular Real Estate Boot Camp offered by the Institute for Real Estate Studies (IRES) which is housed in the Smeal College of Business. Students are also encouraged to join the Real Estate Society club while at Penn State.

Effective Date: Spring 2018
End Date: Fall 2023

SPATIAL ANALYSIS AND ENGINEERING DESIGN PRINCIPLES

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State DuBois

SPATIAL ANALYSIS AND ENGINEERING DESIGN PRINCIPLES (SAEDSG)

This certificate provides innovative instruction about the application of new design methods and processes in a variety of engineering disciplines. The certificate emphasizes how to use CAD software to create concise drawings to develop an effective design system to provide solutions for specific products, systems, components, or services. Contact Diana Ricotta at Penn State DuBois, 814-375-4718 or dricotta@psu.edu.
<http://www.ds.psu.edu/CE/21385.htm?cn21D>

To earn an undergraduate certificate in SPATIAL ANALYSIS AND ENGINEERING DESIGN PRINCIPLES, a minimum of 7 credits is required.

PRESCRIBED COURSES

EDSGN 100
EDSGN 110
EDSGN 210

No Prerequisites Required.

Effective Date: Fall Semester 2009

Expiration Date:

Last Revised by the Department: 04/05/2012

CC CCBUS

SYSTEMS, APPLICATIONS, AND PRODUCTS IN DATA PROCESSING

Undergraduate Certificate Program

Frank DeWolf
281 Jack Burke Res Center
Penn State Erie
Phone: 814-898-7270
E-mail: fwd101@psu.edu

World Campus

SYSTEMS, APPLICATIONS, ANDPRODUCTS IN DATA PROCESSING (SAP)

Differentiate yourself in a competitive job market. This 9-credit certificate program will teach you applied business concepts, using SAP as a teaching tool. Knowledge of SAP appeals to professionals seeking to move into, and persons completing a degree in, one of the following fields: business management, operations analysis, computer software, and information systems.

To earn an undergraduate certificate in SYSTEMS, APPLICATIONS, ANDPRODUCTS IN DATA PROCESSING, a minimum of 9 credits is required.

PRESCRIBED COURSES

MIS 404 OR SCM 445 OR SCM 460 OR SCM 465

Applicants must have completed 60 credits with a minimum 2.0 GPA and completed the necessary prerequisites for MIS 497C/404, SCM 465 & SCM 497A. Students are to choose 3 courses to fulfill the 9 credit certificate. Past courses - MIS 497C is now MIS 404 and SCM 497A is now SCM 445.

Prerequisites Required.

Effective Date: Fall Semester 2009

Expiration Date:

Last Revised by the Department: 11/14/2011

BC BCCOM

ERP CERTIFICATE WITH SAP

Undergraduate Certificate Program

Frank DeWolf
281 Jack Burke Res Center
Penn State Erie
Phone: 814-898-7270
E-mail: fwd101@psu.edu

Abington College, Altoona College, Behrend College, Berks College, Capital College, King of Prussia, Penn State Beaver, Penn State Brandywine, Penn State Carlisle, Penn State DuBois, Penn State Fayette, Penn State Greater Allegheny, Penn State Hazelton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State New Kensington, Penn State Schuylkill, Penn State Shenango, Penn State Wilkes-Barre, Penn State Worthington Scranton, University Park

ERP CERTIFICATE WITH SAP (SAPBC)

SAP IS RECOGNIZED AS THE WORLD LEADER IN THE DEVELOPMENT OF E-BUSINESS APPLICATION SOFTWARE. THE GOAL IS TO USE SAP TECHNOLOGY AS A TOOL TO HELP TEACH BUSINESS CONCEPTS. COMPLETE THREE OF THE FOUR COURSES LISTED WITH A "C" OR BETTER.

To earn an undergraduate certificate in ERP WITH SAP, a minimum of 9 credits is required.

PRESCRIBED COURSES

Take three of the four courses: MIS 304, SCM 460, SCM 445, SCM 465 with a "C" or better.

Prerequisites Required.

Effective Date: Fall Semester 2006

Expiration Date:

Last Revised by the Department: 11/11/2011

BCBSCH

Smeal College Business Fundamentals

Undergraduate Certificate Program

Lisa L. Posey
202 Business Building
University Park, PA 16802
814-863-1947
SCBC@meal.psu.edu

Smeal College Business Fundamentals

The Smeal College Business Fundamentals Certificate provides non-Smeal students with the background and knowledge for careers in corporate and non-profit settings. Core courses are framed around an integrated approach to management, finance, global operations, product development and promotion, and legal aspects of business. Students gain practical skills needed to compete in today's rapidly changing business environment.

A grade of C or better is required in all prescribed courses; these courses must be taken at Penn State. Provided that at least three of the five courses are taken in the Smeal College of Business, certificate courses may be satisfied by substituting Penn State courses with comparable content at the same level with the approval of the Smeal College. Students must be enrolled in a non-business baccalaureate program to pursue this certificate.

Prerequisite Courses:

ACCTG 211, ECON 102, and three credits of 200-level statistics.

Prescribed Courses

BA 301
BA 302
BA 303
BA 304
BLAW 243 or IB 303

Effective Semester: Summer Semester 2015

Science Research Distinction (SCIRES)

Undergraduate Certificate Program

Mary Beth Williams
Associate Dean for Undergraduate Education
Eberly College of Science
0428 Thomas Building
Phone: 814-863-0284
Email: mew17@psu.edu

University Park

The certificate will provide an incentive for students to write a thesis based on an independent research project. Students may be entered into the certificate program upon identification of a research mentor. Members of the graduate faculty are eligible to be mentors. Emeritus faculty or non-tenure track faculty members may serve as mentors, subject to approval by the Associate Dean for Undergraduate Education. Students must engage in research activities over the course of at least 3 semesters or 2 semesters and a summer. Theses must be approved by the research mentor, a reader who is a faculty member eligible to serve as a research mentor, and the Department Head or Director of Undergraduate Studies of a unit within ECoS unless the department has a specific alternative policy in place for thesis approval. The schedule for submission of theses will be the same as Schreyer Honors Theses. Honors students cannot use a single thesis to earn both the distinction of honors and a Research Distinction Certificate but may earn both distinctions by production of independent theses.

PRESCRIBED COURSES

6 credits in independent research in Eberly College of Science
ASTRO 296 or ASTRO 496 or BMB 496 or BMB 488 or BIOL 296 or BIOL 496 or CHEM 294 or CHEM 494 or FRNSC 496 or MATH 296 or MATH 496 or PHYS 296
PHYS 496 or STAT 496

SC 494 section 002 (1 credit) in semester that thesis is approved

Effective Date: Fall Semester 2013

SUPPLY CHAIN MANAGEMENT

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State Beaver, Penn State Brandywine, Penn State DuBois, Penn State Fayette, Penn State Hazleton, Penn State Lehigh Valley, Penn State Mont Alto, Penn State Schuylkill, Penn State Wilkes Barre, Penn State Worthington Scranton

SUPPLY CHAIN MANAGEMENT (SCM)

The certificate program in logistics and supply chain management introduces you to key concepts in the field, such as systems analysis, trade-off analysis, transport systems, procurement, inventory management, and supply chain integration and strategy. The program provides an overview of logistics and supply chain management and addresses the needs of manufacturers, wholesalers, retailers, merchandisers, transportation and warehousing firms, and government agencies. The implications of e-commerce in relation to supply chain management are also explored.

To earn an undergraduate certificate in SUPPLY CHAIN MANAGEMENT, a minimum of 12 credits is required.

PRESCRIBED COURSES

SCM 301
SCM 320
SCM 416
SCM 460

Prerequisites Required.

Effective Date: Spring Semester 1999

Expiration Date:

Last Revised by the Department: 11/14/2011

CC

Supply Chain and Operations

Undergraduate Certificate Program

Sue Fitch
120 Ridge View Dr
Dunmore, PA 18512
570-963-2600
E-Mail: wpsuice@psu.edu

Penn State Hazleton, Penn State Wilkes-Barre, Penn State Worthington Scranton

Supply Chain and Operations (SCOPS)

This 9 credit certificate program is for those individuals with exposure and experience in the Production Directorate and other departments at Tobyhanna Army Depot, (TYAD) Tobyhanna, PA. This program should enhance the participants knowledge in Supply Chain Management, Demand Fulfillment and Strategic Procurement as it applies to the depot's mission within the DOD.

Admission Requirements:

Participants must be employees of TYAD and have some college experience.

List of Courses* Included in the Certificate:

SCM 301(3)
SCM 404(3)
SCM 406(3)

Effective Semester: Spring 2015

SUPERVISORY LEADERSHIP FOR PROFESSIONALS

Undergraduate Certificate Program

Mark Threeton
301C Keller Building
University Park, PA 16802
Phone: 814-863-5361
Email: mdt177@psu.edu

University Park

SUPERVISORY LEADERSHIP FOR PROFESSIONALS (SLFP)

This certificate is designed for the adult learner who would like to gain knowledge of essential supervisory leadership concepts. These adult learners may already possess a degree in an occupational discipline, but need to augment their knowledge and resumes to advance their careers with their current employer or transition into a new job. Adult learners taking this certificate may also be taking post-secondary credit courses for the first time.

To earn an undergraduate certificate in SUPERVISORY LEADERSHIP FOR PROFESSIONALS, a minimum of 9 credits is required.

Admission Requirements:

High school diploma and two years of work experience.

REQUIRED COURSES:

WFED 310
WFED 450
WFED 411

Effective Semester: Fall 2013

SPACE SYSTEMS ENGINEERING

Undergraduate Certificate Program

Sven Bilen
213N Hammond Bldg
University Park
Phone: 814-863-1526
E-mail: sgb100@psu.edu

University Park

SPACE SYSTEMS ENGINEERING (SPSYS)

This certificate program is designed to prepare students for careers in the space industry and for work on space systems. To achieve this, a minimum program of three space systems engineering related courses, a space systems engineering seminar, and project work is to be completed. For entrance into the Certificate program, students must be at least 5th semester standing. The cumulative GPA considered for admission will be consistent with, or equivalent to, the GPA minimum of 2.0 for maintaining good academic standing. Students must earn a C grade or better in each of the courses to continue with the Certificate.

To earn an undergraduate certificate in SPACE SYSTEMS ENGINEERING, a minimum of 12 credits is required.

PRESCRIBED COURSES

EE 474
EE 472 OR AERSP 492 OR EE 474
OR AERSP 401A OR AERSP 401B OR AERSP 430
OR AERSP 450 OR AERSP 497 OR AERSP 597
OR AERSP 550 OR AERSP 597
EE 477 OR METEO 477 OR EE 439 OR EE 471
OR NUCE 490 OR EE 534
OR EE 576 OR EE 579
OR NUCE 540 OR AERSP 540 OR EE 541
OR EE 580 OR EE 581
OR AERSP 55 OR STS 55 OR AERSP 309
OR EDSGN 597 OR GEOSC 21 OR GEOSC 474

Students must complete an application. A project report must be submitted adhering to SPSYS Certificate formatting and systems content guidelines. Note:

Prerequisites Required.

Effective Date: Spring Semester 2006

Expiration Date:

Last Revised by the Department: 11/11/2011

EN AERSP

Sports Administration

Undergraduate Certificate Program

Douglas M. Charles
Penn State Greater Allegheny
Telephone: 412 675 9167
E-Mail: dmc166@psu.edu

Greater Allegheny

Sports Administration (SPTADM)

This 15-credit interdisciplinary program offers students an introduction to different aspects of sports administration careers, broadly defined. Students who complete this certificate will enhance their portfolios and career opportunities to include working in the fields of sports management, business/retail, media, sporting teams, and recreational programs. Students are required to complete 3 credits of internship (from list A) with a sports administration-related organization; 6 credits from two different discipline codes of 100- and/or 200-level courses from list B; and 6 credits from two different discipline codes of 300- and/or 400-level courses from list C.

Admission Requirements:

Students should be aware of possible course prerequisites for some of the listed courses

LIST A

3 credits from the following:

BA 495A (3) Internship
CAS 495 (3) Internship
COMM 495 (3) Internship
PSYCH 495 (3) Internship

LIST B

6 credits from two different discipline codes from the following:

ACCTG 211 (4) Financial & Managerial Acct
CAS 252 (3) Business & Professional Communication
CAS 203 (3) Interpersonal Communication
COMM 100 (3) Mass Media & Society
COMM 170 (3) Intro to the Sports Industry
ECON 102 (3) Intro Micro Economics
FIN 100 (3) Intro to Finance *or* FIN 301(3) Corporate Finance
HIST 113 (3) Baseball in Comparative History
HIST 155 (3) American Business History
KINES 141 (3) The Socio-Cultural Dynamics of Kinesiology
PHIL 103 (3) Ethics
STAT 100 (3) Statistics *or* STAT 200 (4) Elementary stats
TURF 100 (3) Turfgrass Management

LIST C

6 credits from two different discipline codes from the following:

AMST 441 (3) History of Sports in USA
COMM 370 (3) Public Relations
COMM 412 (3) Sports, Media & Society
COMM 458 (3) Media Law Ethics
COMM 476 (3) Sports Writing
COMM 478 (3) Sports Information
CRIMJ 467/CRIM 467/SOC 467 (3) Law & Society
ECON 460 (3) Issues in Sports Econ
KINES 395B (1) Leadership Practicum: KINES
KINES 439 (3) Ethics in Sport and Sport Management
KINES 486 (3) Legal Issues in Sport
LER 459 (3) Collective Bargaining in Prof Sports
MGMT 402 (3) Experiences in Organizational Relations
MGMT 433 (3) Leadership and Team Building
MKTG 310 (3) Public Relations & Marketing
MKTG 443 (3) Sports Marketing

Effective Semester: Summer 2014

Security and Risk Analysis

Undergraduate Certificate Program

Mary Beth Rosson, Associate Dean for Graduate and Undergraduate Studies, College of IST
332G Information Sciences and Technology Building
University Park
Phone: 814-863-3450
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Penn State Lehigh Valley
World Campus

Security and Risk Analysis (SRA)

Our society operates through information and communication technology-based infrastructures from the Internet to cell phones to organization-specific information systems across all sectors of our economy. We use these infrastructures to communicate; to conduct business; to facilitate relationships between governments; to analyze data for trends in business, social, and international settings; and to use the outputs to make decisions in countless venues. These infrastructures hold data which holds clues to how we interact with society, government, and the economy. The SRA certificate provides introductory curriculum that covers information systems, information assurance (both digital and physical security) and intelligence analysis.

PRESCRIBED COURSES

IST 110
SRA 111
SRA 211
SRA 221
CMPSC 101 or CMPSC 121 or IST 140

A grade of "C" or higher is required in all courses for the certificate; no course substitutions are permitted. Courses taken more than 10 years ago will not apply automatically towards completion of the certificate but instead will require review by the academic unit.

Effective Semester: Spring 2008

SUPERVISORY MANAGEMENT

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State York

SUPERVISORY MANAGEMENT (SU MGT)

This post associate certificate is designed for adults who may be seeking a bachelors degree.

To earn an undergraduate certificate in SUPERVISORY MANAGEMENT, a minimum of 9 credits is required.

PRESCRIBED COURSES

MGMT 301
MGMT 321
MATH 21

Math 004 or successful completion of entrance exam and 60 credits

Prerequisites Required.

Effective Date: Spring Semester 2007

Expiration Date:

Last Revised by the Department: 04/05/2012

CC CCBUS

TECHNICAL AND BUSINESS WRITING

Undergraduate Certificate Program

Nora Shultz
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Penn State Abington
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E-mail: nus19@psu.edu

Abington College

TECHNICAL AND BUSINESS WRITING (TECHWR)

Designed for adults learners who seek a competitive edge in the workplace and current undergraduate students preparing for careers. Program provides two tracks: technical (proposals, reports, research strategies, web-based) and business (design, composing in multimedia, web-based). Both include how to create informative, persuasive, web pages and presentations common to business, industry, and government. Students are assigned a faculty mentor, and create and maintain an e-portfolio. The program can be completed for 18 undergraduate credits.

To earn an undergraduate certificate in TECHNICAL AND BUSINESS WRITING, a minimum of 15 credits is required.

Students will complete five courses from either track:

Technical Writing Track:
ENGL 215
ART 201 or COMM 241
ENGL 416
ENGL 418
ENGL 420
Prerequisite: ENGL 202C

Business Writing/Web Track:
ENGL 215
ART 201 or COMM 241
ENGL 419
ENGL 420
ENGL 480
Prerequisite: ENGL 202D

Effective Date: Fall Semester 2011

Expiration Date:

Last Revised by the Department: 8/11/2015

AB

Trauma Studies

Undergraduate Certificate Program

Dr. Melanie Hetzel-Riggin
Penn State Behrend
School of Humanities and Social Sciences
108 Turnbull Hall
Phone: 814-898-6949
e-mail: mdh33@psu.edu
Penn State Erie

Trauma Studies (TR ST)

This 18 credit certificate will provide the core information and competencies for students interested in pursuing research and applied experiences in trauma studies. The certificate is open to all majors; students will be provided with an interdisciplinary understanding of the psychological, historical, sociocultural, political, and physiological aspects of the effects of trauma. It will also provide students a greater understanding of the unique economic, occupational, physical, medical, and interpersonal needs of those recovering from trauma. The certificate is consistent with psychology program goals to develop clear career tracks for current students interested in the applied fields of psychology.

PRESCRIBED COURSES

PSYCH 100
PSYCH 442

Select six credits from the following: HDFS 258, KINES 81, KINES 82, NURS 464, PSYCH 243, SOC 12, SOC 13, SOC 409, WMNST 103, WMNST 423.
Select six credits from the following: CMLIT 143, HIST 121, HIST 130, HIST 173, HIST 444, PLSC 14, PLSC 91, PLSC 123, PLSC 132, PLSC 155, PLSC 436, PLSC 437, PLSC 439.

Effective Date: Summer 2015

Turfgrass Management

Undergraduate Certificate Program

Andrew McNitt
116 Ag Sci & Ind Bldg
University Park, PA
Phone: 814-863-1368
Email: asm4@psu.edu

World Campus

TURFGRASS MANAGEMENT, BASIC (TURFB)

Students in this program will build the knowledge and skill necessary to assess, treat, and manage turf in any climate or terrain. This program addresses pest management, turfgrass cultural systems, and turfgrass edaphology and culminates in a series of case studies in turfgrass management

To earn an undergraduate certificate in TURFGRASS MANAGEMENT, BASIC, a minimum of 15 credits is required.

PRESCRIBED COURSES

TURF 230 (1)

TURF 235 (3)

Select 11-13 credits from the following courses: ENT 317(3); PPEM 412(3). TURF 238(3), TURF 425(3); TURF 434(3), TURF 435(4), TURF 436(3)

No Prerequisites Required.

Effective Date: Fall 2017

Last Revised by the Department: 9/8/2017

TURFGRASS MANAGEMENT, ADVANCED

Undergraduate Certificate Program

Andrew McNitt
116 Ag Sci & Ind Bldg
University Park, PA
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Email: asm4@psu.edu

World Campus

TURFGRASS MANAGEMENT, ADVANCED (TURF2)

This 30-credit certificate program is a comprehensive course of study that builds upon the basic turfgrass management certificate program. It's ideal for those who already have a bachelor's degree in another field and for those who are working toward a bachelor's degree in turfgrass.

To earn an undergraduate certificate in TURFGRASS MANAGEMENT, ADVANCED, a minimum of 30 credits is required.

PRESCRIBED COURSES

TURF 230(1)
TURF 235 (3)
TURF 490 (1)
TURF 495(1-18)

Select 21-22 credits from additional courses: ENT 317(3); PPEM 412(3); SOILS 101(3); TURF 238(3); TURF 425(3); TURF 434(3); TURF 435(4); TURF 436(3)

No Prerequisites Required.

Effective Date: Fall 2017

Expiration Date:

Last Revised by the Department: 9/8/2017

AG CRPSS

WEATHER FORECASTING

Undergraduate Certificate Program

David Babb
2217 Earth and Engr Sciences
University Park
Phone: 814-863-3918:
E-mail: dbabb@ems.psu.edu

World Campus

WEATHER FORECASTING (WFC)

Students in this program will have an opportunity to become a better-informed, critical consumer of weather-related news. Students will also have a chance to use powerful, Web-based forecasting tools. There are no formal calculus or physics requirements for entrance to the program.

To earn an undergraduate certificate in WEATHER FORECASTING, a minimum of 12 credits is required.

PRESCRIBED COURSES

METEO 101
METEO 241
METEO 361
METEO 410

No Prerequisites Required.

Effective Date: Spring Semester 2004

Expiration Date:

Last Revised by the Department: 11/07/2011

EM METEO

YOUTH DEVELOPMENT AND SOCIAL JUSTICE

Undergraduate Certificate Program

Shirl Henry
111 Old Main
University Park
Phone: 814-863-0327
E-mail: sah43@psu.edu

Penn State Brandywine

YOUTH DEVELOPMENT AND SOCIAL JUSTICE (YDSJ)

The 18-credit certificate program was designed to help understand the unique challenges facing adolescents and young adults. Intended for counselors, educators, family therapists, social workers and other professionals dedicated to serving the developmental needs of youth in contemporary society, the program provides an overview of the major issues that impact youth development from a social justice perspective. To register for the certificate program, participants are required to have previously earned at least 60 credits. Take all the following courses: HD FS 239, CRIMJ 013 & HD FS 397. Choose 9 credits, at least 6 of which must be at the 400-level: SOC 005, HD FS 301, HD FS 410, HD FS 411, HD FS 414, HD FS 432, HD FS 433 & CRIMJ 441.

To earn an undergraduate certificate in YOUTH DEVELOPMENT AND SOCIAL JUSTICE, a minimum of 18 credits is required.

PRESCRIBED COURSES

HDFS 239
CRIMJ 13
HDFS 397
SOC 5 OR HDFS 301 OR HDFS 410 OR HDFS 411
HDFS 414 OR HDFS 432 OR HDFS 433 OR CRIMJ 441

Prerequisites Required.

Effective Date: Fall Semester 2009

Expiration Date:

Last Revised by the Department: 11/14/2011

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