

# University Bulletin

## Undergraduate Degree Programs

### Primary Navigation

#### Penn State Abington

Penn State's Abington College, located on forty-five picturesque acres in suburban Philadelphia, offers a small-university environment within the context of a major university. Students beginning their academic careers at Penn State Abington have the flexibility to complete their degrees at Abington, University Park, or at one of the several other Penn State locations around the state.

The college also offers a full range of academic and student support services, including a lower-division college, an honors program, an upper-division Schreyer Honors College program, internships, undergraduate research with faculty, state-of-the-art computer facilities, a learning center, a wide range of student clubs and organizations, varsity and club sports, and a career development center. For additional information, please contact the Office of Admissions, Penn State Abington, 1600 Woodland Road, Abington, PA 19001; 215-881-7600.

In addition to offering the lower division courses of more than 160 Penn State majors, Penn State Abington offers baccalaureate degree programs that can be completed at Penn State Abington. See "[Majors and Programs](#)" on the Penn State Abington website for a current list.

#### CONTINUING AND DISTANCE EDUCATION

Penn State Abington offers one of the most comprehensive professional development programs in the Philadelphia region. Workshops, seminars, and certificate programs are offered on campus year round. State-of-the-art computer labs and courses, designed to keep pace with a rapidly changing market, are available through Abington's Center for Information and Computer Technology. In addition, corporate on-site training and development, and credit programs are provided, tailored to the needs of area businesses and organizations. Visit Penn State Abington's Continuing and Distance Education site at [www.abington.psu.edu/ce](http://www.abington.psu.edu/ce) on the web.

#### RECOMMENDED ACADEMIC PLANS

Recommended Academic Plans provide, in table form, the courses students might schedule semester by semester as they pursue a specific undergraduate degree. Each college or campus maintains Recommended Academic Plans for its own majors/degree programs. Links to these plans are on the Division of Undergraduate Studies website at: <http://www.dus.psu.edu/semplans.htm>. Questions concerning the Recommended Academic Plans should be directed to the college or campus involved or the Division of Undergraduate Studies.

#### GENERAL GRADUATION REQUIREMENTS

All baccalaureate degree candidates must follow the graduation requirements as established by the University Faculty Senate:

1. Minimum of 2.00 cumulative grade-point average.
2. Completion of minimum total credits for graduation. Descriptions are available in this bulletin for the minimum number of credits required for each major.
3. Completion of all General Education, College (B.A. degrees only), elective, and major requirements.
4. All courses fulfilling major requirements must be completed with a grade of C or higher.
5. Students wishing to graduate with a minor must apply for the minor no later than the end of the semester prior to graduation. All required course work must be completed with a C or higher by the end of the semester the student plans to graduate.
6. Students in Bachelor of Arts degree programs must complete level 003 of a foreign language with a D or higher.
7. Students in Bachelor of Science degree programs must have either 2 Carnegie Units of foreign language completed prior to admission to Penn State, or a grade of C or higher in college-level 001 or 002 of a foreign language, or a grade of D or higher in college-level 3.

**Note:**

1. ENGL 004, 005; MATH 001, 002, 003, 004, and ESL 004 cannot be counted toward the total number of credits required for graduation.
2. Although a student may repeat a required course in which a grade of D was received, the credits for such a course may be counted only once toward the total number of credits required for graduation.

See [B.A. Degree Requirements](#) for courses that meet University-wide bachelor of arts degree requirements.

**PENN STATE ABINGTON**

DAMIAN FERNANDEZ, *Chancellor*

ANDREW AUGUST, *Interim Associate Dean for Academic Affairs*

SAMIR OUZOMGI, *Assistant Dean for Policy, Planning, and Assessment*

**COLLEGE ACADEMIC ORGANIZATION**

Arts and Humanities Division -- ROY ROBSON, *Head*

Continuing Education -- JANE A. OWENS, *Senior Director*

Library -- DOLORES FIDISHUN, *Head Librarian*

Registrar -- JOAN M. RAUDENBUSH

Science and Engineering Division -- ZAFER HATAHET, *Head*

Social Sciences Division -- FRANCES M. SESSA, *Head*

Undergraduate Studies, Division of -- NITA T. GUZMAN, *Manager*

## Baccalaureate Degrees

### 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 463(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)

**[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: Summer Session 2011

Blue Sheet Item #:40-01-044

Review Date: 8/16/2011

UCA Revision #1: 8/2/06

UCA Revision #2: 7/26/07

CL

## 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<sup>[1]</sup>

**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)	<b>AMST 491W*</b>	3	<b>AMST 491W*</b>	3
	400-level AMST course	3	400 level AMST course	3
	400-level AMST supporting course	3	<b>AMST 500*</b>	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	<b>AMST 591*</b>	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](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

## 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 217(3), ART 220(3), ART 223(3), ART 230(3), ART 240(3), ART 250(3), ART 251(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

## 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 Sate 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), PPEM 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), PPEM 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** (24-27 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 410(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), HORT 440W(3), PPEM 416(2-4), PPATH 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 -- AN SC 442(3), B M B 400(2-3), B M B 450(2), BIOL 404(3), BIOL 405(3), BIOL 407(3), BIOL 410(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 471(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** (23-30 credits)

Select 23-30 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 410(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 471(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 471(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 471(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 410(3), 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), HORT 440W(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 471(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 471(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), 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.

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

## 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.

Last Revised by the Department: Fall Semester 2013

Blue Sheet Item #: 42-04-065

Review Date: 01/14/2014

UCA Revision #1: 8/3/06

### Comments

## 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

(3-12 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:** 3-11 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:** 51-52 credits **[1]**

**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 490(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: BA 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

## **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<sup>[1]</sup>

(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**<sup>[1]</sup>

(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)<sup>45</sup>

**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

## 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 (ECEE) 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), SCI ED 458(3), SPLED 400(4), SPLED 403A(3), SS ED 430W(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), HD FS 469U IL(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 411 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 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

# 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<sup>[1]</sup>

**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

## **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)[11], ECON 102 GS(3)[11], ENGL 202D GWS(3), FIN 301(3)[11], MGMT 301(3), MKTG 301(3) (Sem: 1-4)

ECON 104 GS(3)[11], ECON 351(3)[11], FIN 302(3)[11], MIS 204(3), MIS 390(3) (Sem: 5-6)

BA 364 US;IL(3), FIN 420(3)[11], SCM 301(3) (Sem: 6-7)

BA 462(3)[11], FIN 475(3)[11] (Sem: 8)

**ADDITIONAL COURSES** (21 credits)

Select 4 credits from MATH 110 GQ(4)[11] or MATH 140 GQ(4)[11] (Sem: 1-4)

Select 4 credits from SCM 200 GQ(4)[11] or STAT 200 GQ(4)[11] (Sem: 1-4)

Select 4 credits from BA 243(4) or BA 241(2) and BA 242(2) (Sem: 5-6)

Select 9 credits[11] 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)

[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 2012

Blue Sheet Item #:40-06-060

Review Date: 04/10/2012

UCA Revision #1: 8/4/06

UCA Revision #2: 7/27/07

**Comments**

CL

## General 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 (SEDTAPP)*

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 General 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 General 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 General Engineering program are designed to prepare graduates who, during the first few years of professional practice will

1. Be employed in public or private sectors in fields such as design, research and development, experimentation and testing, manufacturing, and technical sales.
2. Demonstrate a level of competence and expertise that may lead to 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 grow an appreciation of the global, environmental, social, and ethical contexts of their work.
5. Be committed to lifelong learning to enhance their careers and provide flexibility in responding to changing social and technical environments, which will enable graduates to pursue advanced degrees or certificate programs.

### **Program Outcomes (Student Outcomes):**

Graduates of the General 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 General Engineering, a minimum of 127 credits are required. This baccalaureate program in General Engineering is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://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): 71 credits**

**PRESCRIBED COURSES:** 45 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)  
EMCH 211(3)[1], EMCH 213(3), MATH 231(2), MATH 251(4)[1], PHYS 212 GN(4)[1], PHYS 214 GN(2) (Sem: 3-4)  
ENGR 490(1), ENGR 491W(3) (Sem: 7-8)

**ADDITIONAL COURSES:** 22 credits

Select 1 credit of First-Year Seminar (Sem:1-2)  
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 1-2)  
ENGL 15 GWS(3) or ENGL 30 GWS(3) (Sem: 1-2)  
CMPSC 121 GQ(3) or CMPSC 201 GQ(3) (Sem: 3-4)  
ECON 102 GS(3) or ECON 104 GS(3) (Sem: 3-4)  
ENGL 202C GWS(3) or ENGL 202D GWS(3) (Sem: 3-4)  
ME 300(3)[1] or EME 301(3)[1] (Sem: 3-4)  
ENGR 350(3)[1], EMCH 407(3)[1], or EMCH 461(3)[1] (Sem: 5-6)

**SUPPORTING COURSES AND RELATED AREAS:** 4 credits

Select 4 credits in General Technical Electives from the program approved list.

**REQUIREMENTS FOR THE OPTION:** 38 credits

**APPLIED MATERIALS OPTION:** (38 credits)

**PRESCRIBED COURSES:** 38 credits

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)

**ALTERNATIVE ENERGY AND POWER GENERATION OPTION:** (38 credits)

**PRESCRIBED COURSES:** 38 credits

EE 210(4)[1] (Sem: 3-4)  
EE 314(3), EGEE 302(3), EME 303(3), ME 345(4), NUCE 401(3) (Sem: 5-6)  
EE 485(3), EE 488(3), EGEE 420(3), EGEE 437(3), EGEE 438(3), EGEE 441(3) (Sem: 7-8)

**MULTIDISCIPLINARY ENGINEERING DESIGN OPTION** (38 credits)

**PRESCRIBED COURSES:** 38 credits

CMPEN 271(3), EE 210(4), EMCH 212(3)[1] (Sem: 3-4)  
CMPEN 331(3), CMPEN 472(3), EE 310(4)[1], EE 352(4)[1] (Sem: 5-6)  
CMPEN 454(3), EDSGN 401(3), EDSGN 410(4)[1], EDSGN 495(1), ENGR 407(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: Fall Semester 2011

Blue Sheet Item #: 40-03-033

Review Date: 11/08/2011

R & T: Approved 5/24/2013

## 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<sup>[1]</sup>

**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

## 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 Lehigh Valley, Penn State Mont Alto, Penn State Schuylkill, Penn State Wilkes-Barre, Penn State Worthington Scranton, Penn State York (ISSCC)*  
*World Campus*

*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[1] 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)[1]

IST 431(3) and IST 432(3) (Sem: 5-8)

**ADDITIONAL COURSES** (6 credits)[1]

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)[1]

IST 242(3) (Sem: 1-4)

IST 311(3) (Sem: 5-8)

**ADDITIONAL COURSES** (9 credits)[1]

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)[1]

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

IS

## 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<sup>[1]</sup>

(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

## 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<sup>[1]</sup>

**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

## **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 Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 8500, Atlanta, GA 30326 (404-975-5000), [www.acenursing.org](http://www.acenursing.org); and 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** (76 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 251(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** (9-11 credits)

CHEM 101 GN(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)

**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 2016

Blue Sheet Item #: 45-03-055

Review Date: 11/15/2016

UCA Revision #1: 8/9/06

HH

Updated contact info for ACEN accrediting agency: 7/31/13

## 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<sup>[1]</sup>

**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 495(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), ANTH 464(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 462(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), CNED 407(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

## 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<sup>[1]</sup>

(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), ANTH 464(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 462(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), CNED 407(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

## 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, mental retardation programs, 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), HDF5 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, HDF5, 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

## 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:

1. (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".)
2. 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.)
3. (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.
4. (0-8 credits) Demonstration of second semester proficiency in a single foreign language.
5. (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.)
6. (10 credits) ECON 102 GS(3), ECON 104 GS(3), ACCTG 211(4)
7. (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)[1], CHEM 111 GN(1), CHEM 112 GN(3), CHEM 113 GN(1), MATH 140 GQ(4)[1], MATH 141 GQ(4) (Sem: 1-2)  
BIOL 110 GN(4)[1] (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)[1], PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4)[1], 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[1] 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)[1], PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4)[1], 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[1] 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)[1], PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4)[1], 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[1] 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)[1], PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4)[1], 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[1] 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)[1], PHYS 212 GN(4), PHYS 213 GN(2), PHYS 214 GN(2); or PHYS 250 GN(4)[1], 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[1] 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)[1], 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[1] 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

[1] 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

## 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.**

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**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 451(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 423(4), CHEM 425(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)

GEO SC 1(3), GEO SC 20 GN(3) or GEO SC 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)  
GEO SC 21 GN(3) or GEO SC 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)  
GEO SC 40 GN(3), GEO SC 440(3) or GEO SC 445(4); 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, GEO SC, 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 402 US;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 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), 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 211(3), CAS 213(3), CAS 215(3), CAS 250(3), CAS 271 US;IL(3), CAS 280(3) or CAS 480(3), 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 110(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 201 GH(3), CAS 202 GS(3), CAS 203 GS(3), CAS 211(3), CAS 213(3), CAS 215(3), CAS 250(3), CAS 280(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), EDTEC 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), WLED 414(3), WLED 422(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 412(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 30 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 30 GS;IL(3), GEOG 40 GS;IL(3), GEOG 120 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



## Associate Degrees

# 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 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

## 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 checksheet, 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

## Minors

### 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 compliment 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 AAAS 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), AAAS/RLST 147 GH;US(3), AAAS/HIST 191 GH;IL(3), AAAS/THEA 208 GA;US;IL(3), AFAM/HIST 210 GH;US(3), AAAS/HIST 240 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/WMNST 410(3), AAAS/THEA 412 US;IL(3), AAAS/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 411(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

## American Studies Minor

*Capital College (AMSTD)*

Capital College - Simon Bronner, [sjb2@psu.edu](mailto:sjb2@psu.edu)

Abington College - Andrew August, [axa24@psu.edu](mailto:axa24@psu.edu)

Penn State Brandywine - Julie Gallagher, [jag63@psu.edu](mailto:jag63@psu.edu)

Penn State Fayette - Jay Precht, [jhp21@psu.edu](mailto:jhp21@psu.edu)

Penn State York - Robert Farrell, [jrf10@psu.edu](mailto:jrf10@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

## Anthropology Minor (*ANTH*)

*Contacts: Abington College, Michael Bernstein, [mjb70@psu.edu](mailto:mjb70@psu.edu); College of the Liberal Arts, Timothy Ryan, [tmr21@psu.edu](mailto: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

## Asian Studies Minor

*Abington, C. Pierce Salguero ([cps14@psu.edu](mailto: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)

Select 3 credits from: ASIA 3 GH;US;IL(3); ASIA 101 GH;GS;IL(3); ASIA 102 GH;IL(3); ASIA 103 GH;US;IL(3); ASIA 104 GH;US;IL(3); ASIA 197(1-9) (Sem: 1-4)

**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 may be permitted up to 6 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.

Last Revised by the Department: Fall Semester 2017

Blue Sheet Item #: 46-01-100

Review Date: 8/22/2017

LA

## Biology Minor (BIOL)

*Contacts: Altoona College, Edward Levri, [epi1@psu.edu](mailto:epi1@psu.edu); Eberly College of Science, Barbara DeHart, [bzd2@psu.edu](mailto:bzd2@psu.edu); Penn State Abington, Eric Ingersoll, [epi1@psu.edu](mailto:epi1@psu.edu); Penn State Berks, Maureen Dunbar, [med18@psu.edu](mailto:med18@psu.edu); Penn State York, Dr. Anne Vardo-Zalik, [amv12@psu.edu](mailto: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:** 18-20 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

## Business Administration Minor

*Capital College (BADMN)*

*Penn State Abington, Dr. Feng Zhang, [fzz34@psu.edu](mailto: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), BLAW 340(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), MRKT 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, ECNMS, FIN, HCM, MIS, IST, MGMT, MRKT, or BESC 408(3), BESC 410(3), BESC 468(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

## **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

## **Civic and Community Engagement Minor**

*College of the Liberal Arts (CIVCM)*

*University Park - Rosa Eberly, [rae2@psu.edu](mailto:rae2@psu.edu) (Coordinator of the program)*

*Penn State Abington - Gary Calore, [gsc1@psu.edu](mailto:gsc1@psu.edu)*

*Penn State Brandywine - Lynn Hartle, [lch1@psu.edu](mailto:lch1@psu.edu)*

*Penn State Erie - Dawn Blasko, [dgb6@psu.edu](mailto:dgb6@psu.edu)*

*Penn State Greater Allegheny - Michael Vicaro, [mpv2@psu.edu](mailto:mpv2@psu.edu)*

*Penn State Beaver - JoAnn Chirico, [jxc64@psu.edu](mailto:jxc64@psu.edu)*

*Penn State Lehigh Valley - Mary Hutchinson, [mcl6@psu.edu](mailto:mcl6@psu.edu)*

*Penn State Schuylkill - Elinor Madigan, [emm17@psu.edu](mailto:emm17@psu.edu)*

*Penn State Mont Alto - Jacqueline Schwab, [sen@psu.edu](mailto:sen@psu.edu)*

*Penn State Berks - Laurie Grobman, [leg8@psu.edu](mailto: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

## **Communication Arts and Sciences Minor (CAS)**

*Contact: Penn State Abington, Roy Robson, [rrr5237@psu.edu](mailto:rrr5237@psu.edu); College of the Liberal Arts, Peter Miraldi, [pnm10@psu.edu](mailto:pnm10@psu.edu); Penn State York, Dr. Deborah Eicher-Catt, [dle4@psu.edu](mailto: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 205(3), CAS 211(3), CAS 213(3), CAS 214(3), CAS 215(3), CAS 250(3), CAS 252(3), CAS 271 US;IL(3), CAS 280(3), or CAS 283(3) (Sem: 3-6)

Select 3 credits from CAS 200(3), CAS 201 GH(3), or CAS 202(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

## 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 304 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

## 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

## English Minor (ENGL)

*University Park, College of the Liberal Arts (ENGL)*

Contact: Abington College, Ellen Knodt, [eak1@psu.edu](mailto:eak1@psu.edu); Altoona College, Erin Murphy, [ecm14@psu.edu](mailto:ecm14@psu.edu); Capital College, Jennifer Hirt, [jlh73@psu.edu](mailto:jlh73@psu.edu); Penn State Brandywine, Adam Sorkin, [ajs2@psu.edu](mailto:ajs2@psu.edu); Penn State Fayette, Danielle Mitchell, [dmm52@psu.edu](mailto:dmm52@psu.edu); Penn State Greater Allegheny, James Jaap, [jaj15@psu.edu](mailto:jaj15@psu.edu); Penn State Mont Alto, Kevin Boon, [kab25@psu.edu](mailto:kab25@psu.edu); Penn State Wilkes-Barre, Steven Putzel, [sdp4@psu.edu](mailto:sdp4@psu.edu); College of the Liberal Arts, Elizabeth Brown, [eaf4@psu.edu](mailto:eaf4@psu.edu); Penn State York, Dr. Jennifer Nesbitt, [jpn12@psu.edu](mailto: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](mailto:gsc1@psu.edu))*

*Penn State Berks - Dr. Sadan Kulturel-Konak ([sxk70@psu.edu](mailto:sxk70@psu.edu))*

*University Park - Dr. Anne Hoag ([amh13@psu.edu](mailto:amh13@psu.edu))*

*University College - Lehigh Valley - Denis Ogden ([dto2@psu.edu](mailto: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.

**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

#### **REQUIRED 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**

**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)

#### **Food and Bio-innovation Cluster**

**Select up to 6 credits of the following 200-300 courses in the College of Agricultural Sciences:** ASM 391(2), ASM 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 417(2), FDSC 430(3), FOR 440(3), HORT 410(3), HORT 450(3), HORT 453(3), HORT 455(3), RSOC 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: Spring Semester 2014

Blue Sheet Item #: 44-01-089

Review Date: 09/15/2015

## **Finance Minor**

*Penn State Abington - contact: Dr. Feng Zhang, [fzz34@psu.edu](mailto:fzz34@psu.edu)*

*Penn State Erie, The Behrend College (FNC)- contact: Greg Filbeck, [mgf11@psu.edu](mailto: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

## **Global and International Studies Minor (INSTD)**

*Contact: Abington College, Fran Sessa, [fms11@psu.edu](mailto:fms11@psu.edu); Penn State Brandywine, Paul Greene, [pdg4@psu.edu](mailto:pdg4@psu.edu); Worthington Scranton, John Dolis, [jjd3@psu.edu](mailto:jjd3@psu.edu); College of the Liberal Arts, Henry Morello, [hum1@psu.edu](mailto: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

## History Minor (*HIST*)

Contact: Abington College, Andrew August, [axa24@psu.edu](mailto:axa24@psu.edu); Altoona College, Marc Harris, [mlh6@psu.edu](mailto:mlh6@psu.edu); College of the Liberal Arts, Mike Milligan, [mjm61@psu.edu](mailto:mjm61@psu.edu); Penn State Berks, Randall Fegley, [raf8@psu.edu](mailto: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

## Human Development and Family Studies Minor (HD FS)

Contact: Abington College, Michael Bernstein, [mjb70@psu.edu](mailto:mjb70@psu.edu); Altoona College, Margaret Benson, [enz@psu.edu](mailto:enz@psu.edu); College of Health and Human Development, Devon M. Thomas, [dmc233@psu.edu](mailto:dmc233@psu.edu); Penn State York, Dr. JeanMarie St. Clair-Christman, [jxs176@psu.edu](mailto: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

## Information Sciences and Technology Minor

Abington College - contact: Joe Oakes, [jxo19@psu.edu](mailto: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

## 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

## Psychology Minor (PSY)



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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

## Religious Studies Minor

*Abington - contact: C. Pierce Salguero, [cps14@psu.edu](mailto: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

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LA

## 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<sup>[1]</sup>

(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

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IS

## Sociology Minor (SOC)

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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)

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Editorial: 3/23/07

## Teaching English to Speakers of Other Languages Minor

*Penn State Abington - contact: Roxanna Senshyn, [rms42@psu.edu](mailto: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 83S 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

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LA

## **Women's Studies Minor (WMNST)**

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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, nonprofit administration, 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 106 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

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