Introduction
The Undergraduate Bulletin is Penn State’s comprehensive source for undergraduate academic information and program requirements.

Use this section and navigation tools throughout the site to become familiar with general Bulletin information and discover new ways to explore academic opportunities across Pennsylvania and the world.

Students should follow the edition of the Bulletin that is active on their first day of class at the University. Past versions can be found on the Archive (http://bulletins.psu.edu/undergraduate/archive) page.

New Features
Program Page Layout
- Consistent layout of program information organized within the following tabs:
  - Overview
  - How to Get In
  - Program Requirements (University Degree, Bachelor of Arts Degree, General Education, and Major requirements)
  - Integrated Undergrad-Grad Program
  - Learning Outcomes
  - Academic Advising
  - Suggested Academic Plan
  - Career Paths
  - Contact

Begin and End Campus
At the top each program page, you will find a box that indicates where you can begin and end a program. Programs may have different begin and end campuses, so it is important to use this information to determine program availability at each campus.

How to Get In
This section describes requirements on how to enter your major. Common examples include, but are not limited to, minimum GPA and/or successful completion of a skills test, coursework, or preparation programs.

Suggested Academic Plan
The course series provided in the Suggested Academic Plan provides only one of many possible ways to move through the curriculum. To create a personalized academic plan, begin by taking the following steps:

- Consult with a Penn State academic adviser on a regular basis to develop and refine your academic plan.
- Use the Suggested Academic Plan in conjunction with your degree audit (accessible in LionPATH as either an Academic Requirements or What If report).
- Familiarize yourself with information available in this Bulletin to learn about academic opportunities.
- Explore resources available on your college and campus websites.

Please note that the University may make changes in policies, procedures, educational offerings, and requirements.

Changes Page
- Real-time amendments to information in the Bulletin will be tracked on the Changes (p. 6) page.
- Currently or previously enrolled students should consult the Bulletin Archive (http://bulletins.psu.edu/undergraduate/archive), their adviser, and degree audit reports for specific requirements.

Course Bubble
When a course link is clicked, a course bubble will appear with important course information including, but not limited to:

- course title, description, and credits;
- prerequisites;
- course attributes and General Education learning objectives;
- if the course is repeatable;
- if the course is cross-listed;
- if the course can be counted towards General Education requirements.

Statement of Nondiscrimination
The University is committed to equal access to programs, facilities, admission, and employment for all persons. It is the policy of the University to maintain an environment free of harassment and free of discrimination against any person because of age, race, color, ancestry, national origin, religion, creed, service in the uniformed services (as defined in state and federal law), veteran status, sex, sexual orientation, marital or family status, pregnancy, pregnancy-related conditions, physical or mental disability, gender, perceived gender, gender identity, genetic information, or political ideas. Discriminatory conduct and harassment, as well as sexual misconduct and relationship violence, violates the dignity of individuals, impedes the realization of the University’s educational mission, and will not be tolerated. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Office, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901; Email: kfl2@psu.edu; Tel 814-863-0471.

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

Start Exploring
The Undergraduate Bulletin is Penn State's comprehensive source for undergraduate academic information and program requirements. Using the search features, explore options to design your own, unique academic path at one of the world's leading research institutions. Discover new opportunities as you pursue your academic passion. Search boxes are located on the Undergraduate Bulletin landing page and throughout the website.

Narrow your search by using the following fields:

Degree Type
Choose the degree type to begin your search. Information on the following degrees are included in the Undergraduate Bulletin:

Associate Degree
Two-year majors that, with few exceptions, provide concentrated instruction to prepare graduates for specialized occupational assignments.
Baccalaureate Degree
Baccalaureate programs of study consist of no less than 120 credits and typically take four years to complete.

Minor
An academic program of at least 18 credits that supplements a major. A minor program may consist of course work in a single area or from several disciplines.

Undergraduate Certificate
Undergraduate certificates can reflect emerging academic areas, necessary professional development requirements, or groups of courses that do not constitute a degree program.

Learn more in the Definitions and Abbreviations (p. 2) section.

Campus
Penn State has over 20 campuses across Pennsylvania. Visit the Campus (http://bulletins.psu.edu/undergraduate/campuses) page to see the full listing and a brief description of each campus.

Interest
Search broad topics to discover programs associated with your interests. From helping people, to science, or business, select an area to help narrow down your academic choices.

College
Academic colleges at Penn State grant degrees and are generally organized around a subject matter. All Penn State majors are divided among academic colleges, which are the units from which students receive their degrees. Visit the College (http://bulletins.psu.edu/undergraduate/colleges) page to see the full listing.

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

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

MORE INFORMATION ABOUT ACADEMIC AUTHORITY (http://undergrad.psu.edu/aappm/P-8-program-descriptions-catalog.html)

Understanding Course Description Information
The course description data that appears in the University Bulletins is directly imported from LionPATH, the student information system. At several times within an academic year, new or updated course description information is approved by the Faculty Senate and entered into LionPATH. This updated information subsequently appears in the University Bulletins on the date(s) it takes effect.

What course description data is currently showing in the University Bulletins?
There are three course effective dates within an academic year. These effective dates correspond to the semesterly releases of the Schedule of Courses. The University Bulletins shows course description data that is active as of the most recently released Schedule of Courses. When an upcoming semester's Schedule of Courses is released, the course description information is updated on the same day to match that course data.

Course Description Update Calendar
September 3, 2019: University Bulletins begins showing course description information that is active for the Spring 2020 semester
November 18, 2019: University Bulletins begins showing course description information that is active for the Summer 2020 semester
February 4, 2020: University Bulletins begins showing course description information that is active for the Fall 2020 semester

Previous Versions of Course Description Information
If a course description is updated after the beginning of an academic year, the previous course description information for that course can be found on the Changes to the UG Bulletin page (p. 6). Course description information from past years can be found in the appropriate archived Bulletin edition (http://bulletins.psu.edu/undergraduate/archive).

Definitions and Abbreviations
Described below are definitions referring to degrees, majors, options, minors, concurrent or sequential majors programs, and integrated undergraduate-graduate degree programs:

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

Baccalaureate Degree
Penn State offers more than 160 majors with four-year baccalaureate degrees. A baccalaureate program of study shall consist of no less than 120 credits. Students may elect to take courses beyond the minimum requirements of a degree program. Particular types of baccalaureate degrees identify educational programs having common objectives and requirements. Degree programs may provide academic, pre-professional, or professional experiences and preparation. Majors lead to a baccalaureate degree. Each student must select a major within a baccalaureate degree type. If options are offered within a major, a student selects one. The student may also elect to enroll in a minor to supplement the major. Alternatively, the student may seek to enroll in multiple majors within the same type of baccalaureate degree or to enroll in a simultaneous degree program.

Undergraduate majors offered at Penn State lead to one or more of the following baccalaureate degrees: Bachelor of Arts, Bachelor of Science, Bachelor of Architectural Engineering (five-year program), Bachelor of Architecture (five-year program), Bachelor of Design, Bachelor of Fine Arts, Bachelor of Humanities, Bachelor of Landscape Architecture (five-year program), Bachelor of Music, Bachelor of Musical Arts, and Bachelor of Philosophy.

Not all degrees are offered at every location. Baccalaureate degrees offered at Penn State include both those that are designed to provide
an academic (including pre-professional) experience and those that are specifically designed to provide professional preparation.

To ensure excellence, all professionally oriented degree majors provide a strong academic base. The Bachelor of Arts degree (with a given major) is an academic degree; the Bachelor of Science degree (with a given major) and the bachelor’s degree in any subject area (e.g., Bachelor of Architecture) are professional degrees. The Bachelor of Philosophy degree, described in the Intercollege Undergraduate Programs section of this Bulletin, is planned individually and may be designed to serve either academic or professional purposes.

**Major**

A major is a plan of study in a field of concentration within a type of baccalaureate degree. Colleges and other degree-granting units may have common requirements for all of their majors. Each major may have requirements identified in prescribed, additional, and supporting courses and related areas categories. Elective credits are not considered part of the major.

MORE INFORMATION ABOUT MAJORS (http://senate.psu.edu/curriculum/guide-to-curricular-procedures/baccalaureate-degree-curriculum)

**Option**

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

**Minor**

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

**Concurrent and Sequential Majors Programs**

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

**Integrated Undergraduate-Graduate (IUG) Degree Program**

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

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

**Abbreviations, Acronyms, and Codes**

Described below are common codes, abbreviations, acronyms, and other types of academic shorthand used at Penn State, along with a brief explanation of each.

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<th>Code</th>
<th>Explanation</th>
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<td>Special topics (course suffix; indicates different versions of the same course, e.g., CAS 100A, CAS 100B, CAS 100C)</td>
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<tr>
<td>A &amp; A</td>
<td>Arts and Architecture (college abbreviation)</td>
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<tr>
<td>AA</td>
<td>Arts and Architecture (college code)</td>
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<tr>
<td>AAPP</td>
<td>Academic Administrative Policies and Procedures Manual</td>
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<td>AB</td>
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<td>AC</td>
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<td>AP</td>
<td>Advanced Placement Program</td>
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<td>APPL</td>
<td>Course requires an application with the School of Music (course characteristic)</td>
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<td>APPT</td>
<td>By appointment (class meeting time)</td>
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<td>AU</td>
<td>Audit, attended regularly (grade reporting symbol)</td>
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<td>AUDN</td>
<td>Course requires an audition (course characteristic)</td>
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<td>AUU</td>
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<td>B</td>
<td>Special topics (course suffix; indicates different versions of the same course, e.g., CAS 100A, CAS 100B, CAS 100C)</td>
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<td>BK</td>
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<td>BK</td>
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<td>BR</td>
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<td>BW</td>
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<td>C</td>
<td>Special topics (course suffix; indicates different versions of the same course, e.g., CAS 100A, CAS 100B, CAS 100C)</td>
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<td>CA</td>
<td>Capital (college code)</td>
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<td>Abbreviation</td>
<td>Description</td>
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<td>CALC</td>
<td>Course requires a calculator (course characteristic)</td>
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<td>CAMP</td>
<td>College Assistance Migrant Program</td>
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<td>CAT</td>
<td>Online catalog, University Libraries</td>
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<td>CC</td>
<td>Commonwealth Campuses</td>
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<tr>
<td>CCP</td>
<td>College Contact Person</td>
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<tr>
<td>CCRR</td>
<td>College Contact and Referral Representative</td>
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<td>CCGS</td>
<td>Council of Commonwealth Student Governments</td>
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<td>CE</td>
<td>Continuing Education</td>
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<tr>
<td>CGPA</td>
<td>Cumulative grade-point average</td>
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<tr>
<td>CIC</td>
<td>Committee on Institutional Cooperation</td>
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<td>CLEP</td>
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<td>CM</td>
<td>Communications (college code)</td>
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<tr>
<td>CNCR</td>
<td>Course is scheduled concurrently with another course (course characteristic)</td>
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<tr>
<td>CNTL</td>
<td>Course is controlled (course characteristic)</td>
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<tr>
<td>COMM</td>
<td>Communications (college abbreviation)</td>
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<tr>
<td>CORD</td>
<td>Course is coordinated with other course(s) (course characteristic)</td>
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<tr>
<td>COST</td>
<td>Course requires an additional fee (course characteristic)</td>
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<td>D</td>
<td>Special topics (course suffix; indicates different versions of the same course, e.g., HIST 297D, HIST 297E)</td>
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<td>DAA</td>
<td>Dean/Director of Academic Affairs</td>
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<td>DF</td>
<td>Deferred grade (grade reporting symbol)</td>
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<td>DN</td>
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<td>DS</td>
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<td>DU</td>
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<td>DUS</td>
<td>Division of Undergraduate Studies (college abbreviation)</td>
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<td>E</td>
<td>Special topics (course suffix; indicates different versions of the same course, e.g., HIST 297D, HIST 297E)</td>
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<td>ECoS</td>
<td>Eberly College of Science</td>
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<td>Education (college code)</td>
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<td>EM</td>
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<td>EOP</td>
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<td>EPR</td>
<td>Early Progress Report</td>
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<td>ER</td>
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<td>ESL</td>
<td>English as a Second Language</td>
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<td>EVEX</td>
<td>Course has evening exams (course characteristic)</td>
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<td>F</td>
<td>Special topics (course suffix; indicates different versions of the same course, e.g., HIST 297F, HIST 297G)</td>
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<td>FE</td>
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<td>FINL</td>
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<td>FL</td>
<td>Failure under pass/fail option (grade reporting symbol)</td>
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<td>G</td>
<td>Special topics (course suffix; indicates different versions of the same course, e.g., HIST 297F, HIST 297G)</td>
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<td>GHW</td>
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<td>GN</td>
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<td>GPA</td>
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<td>GQ</td>
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<td>I</td>
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<td>Abbreviation</td>
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<td>I COL</td>
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<td>IB</td>
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<td>INCP</td>
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<td>Course is integrated with other courses (course characteristic)</td>
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<td>Course meets at an off-campus location (course characteristic)</td>
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<td>PREQ</td>
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<td>Reserve Officers’ Training Corps</td>
</tr>
<tr>
<td>S</td>
<td>First-Year Seminar (course suffix)</td>
</tr>
<tr>
<td>SA</td>
<td>Satisfactory achievement (grade reporting symbol)</td>
</tr>
<tr>
<td>SATL</td>
<td>Course is offered at multiple locations via satellite uplink (course characteristic)</td>
</tr>
<tr>
<td>SC</td>
<td>Science, Eberly College of (college code)</td>
</tr>
<tr>
<td>SCIENT</td>
<td>Science, Eberly College of (college abbreviation)</td>
</tr>
<tr>
<td>SEG</td>
<td>Course is segmented (course characteristic)</td>
</tr>
<tr>
<td>SGPA</td>
<td>Semester grade-point average</td>
</tr>
<tr>
<td>SH</td>
<td>Shenango (campus code)</td>
</tr>
<tr>
<td>SI</td>
<td>Supplemental Instruction</td>
</tr>
<tr>
<td>SITE</td>
<td>Schreyer Institute for Teaching Excellence</td>
</tr>
<tr>
<td>SL</td>
<td>Schuylkill (campus code)</td>
</tr>
<tr>
<td>SLO</td>
<td>Special Living Options</td>
</tr>
<tr>
<td>SOTP</td>
<td>Student Orientation and Transition Programs</td>
</tr>
<tr>
<td>SRTE</td>
<td>Student Ratings of Teacher Effectiveness</td>
</tr>
<tr>
<td>SSSP</td>
<td>Student Support Services Program</td>
</tr>
<tr>
<td>T</td>
<td>First-Year Seminar and Honors (course suffix)</td>
</tr>
<tr>
<td>TMDT</td>
<td>Course has additional meeting times/dates (course characteristic)</td>
</tr>
</tbody>
</table>
Changes to the UG Bulletin

Changes to the Undergraduate Bulletin will be tracked in real-time and listed below. At the end of every semester, these updates will be incorporated into the Bulletin.

Courses Added: Effective Fall 2019

- AERSP 458: Advanced Orbital Mechanics
- ANSC 299: Foreign Studies
- ART 477: Curator’s Workshop
- BMB 210: Phage Genomics
- CAMS 25U: Greek Civilization – Honors
- CED 199: Foreign Studies
- CED 299: Foreign Studies
- CED 399: Foreign Studies
- CI 333: Education and the Student in Recovery
- DANCE 260: Introduction to Modern Dance
- ENGL 223N: Shakespeare: Page, Stage, and Screen
- ERM 449: Sustainable Water Management: Economics and Policy
- FDSC 299: Foreign Studies
- FOR 299: Foreign Studies
- HIST 145N: The Holocaust and Human Rights
- HIST 472: The Ottoman Empire
- HM 208: Social, Cultural, and Health Influences of Alcohol
- HPA 443: Nursing Home Administration
- HPA 444: Aging Policy in the United States
- HPA 454: Health Care Professional Communication
- KINES 29B: Total Golf
- KINES 45A: PADI Basic SCUBA
- KINES 92: Personal Fitness and Wellness
- KINES 459: Community Engagement and Outreach in Kinesiology
- PLSC 222N: Science and Politics of the Female Athlete
- PORT 200: Advanced Portuguese via the Arts
- PORT 365: Imagining Brazilian Cities
- PSYCH 217N: The Science of Resilience
- RPTM 102A: PGA Golf Operations Best Practices
- RPTM 254: PGA Teaching and Coaching 2
- RPTM 280: Wilderness First Aid
- RPTM 335: Outdoor Recreation Consortium
- RPTM 350: PGA Facility Management Level 3
- RPTM 354: PGA Teaching and Coaching 3
- RPTM 395A: Internship in recreational services
- RPTM 457: Peer Mentoring
- SC 451: Science Outreach and Communication
- THEA 101N: Performance and Society
- THEA 111: The Fundamentals of Singing and Vocal Production
- THEA 211: Dramaturgy
- WFED 403: Technologies for Work Effectiveness
- WFS 299: Foreign Studies
- WFS 489: Supervised Experience in College Teaching
- WMNST 207N: LGBTQ+ Identity, Culture and The Arts

Common abbreviations for course attributes and suffixes can be found in the University Course Descriptions (http://bulletins.psu.edu/university-course-descriptions) section.
• WMNST 220: Beyond Birth Control: Feminist Perspectives on Women’s Sexualities

Courses Added: Effective Spring 2020

• AGSC 100: A&ESE First Year Seminar
• CAMS 142: Sport and Spectacle in the Ancient Mediterranean World
• CED 360: The Corporation and Social Responsibility
• CED 440: Labor in the Global Economy
• CED 460: Policy, Politics and Perspectives on Social & Environmental Responsibility
• CED 462: Corporate Social and Environmental Performance
• DS 442: Artificial Intelligence
• EDUC 395: Internship
• FRNAR 100Z: Introduction to Forensic Photography
• FRNAR 200: Intermediate Forensic Photography
• FRNAR 100Z: Introduction to Forensic Science
• GEOG 453: Geospatial Applications in Water Resources & Aquatic Ecosystems
• PLANT 299: Foreign Studies
• PLANT 499: Foreign Studies
• SPAN 470: Youth Cultures in Latin(a/o) America
• THEA 106: Theatre Foundations
• THEA 386: Stage Managing Fundamentals I

Courses Dropped: Effective Spring 2020

• CHEM 443: Electrochemistry and Chromatography Laboratory
• CHEM 445: Atomic and Molecular Spectroscopy Laboratory
• ECON 490: Introduction to Econometrics
• GEOG 323: GIS and Social Theory
• ME 105: Product Dissection A: Bicycles–First-Year Seminar
• ME 106: Product Dissection B: Household Appliances–First-Year Seminar
• ME 107: Product Dissection C: The Enigmatic Engine–First-Year Seminar
• ME 240: Product Dissection
• ME 302: Engineering Thermodynamics and Heat Transfer
• PHIL 203H: Nineteenth Century Philosophy
• PHIL 221: Philosophy of Science

Course Changes: Effective Spring 2020

AA 105: Interdisciplinary Digital Studio (IDS) Seminar I (3 Credits)
Old Listing Effective Through Fall 2019:

Changes Effective Spring 2020:

• Title
• Abbreviated Title
• Abbreviation to DART
• Number to 100

AA 110: Interdisciplinary Digital Media Studio I (3 Credits)
Old Listing Effective Through Fall 2019:

Provides arts and design students an interdisciplinary studio-based exploration of critical, theoretical, and historical understandings of digital media. A&A 110 Interdisciplinary Digital Media Studio I (3) This course is the first of a series of required courses for the Interdisciplinary Digital Studio (IDS) degree. Students in A&A 110 will gain an interdisciplinary and collaborative foundation through the studio-based exploration of digital media arts and design processes. This course will foster interdisciplinary awareness and diverse perspectives and provide students with a common language with which they can communicate and collaborate with other students in the arts and design disciplines. The course will integrate a variety of methodologies and approaches rather than discipline-specific subject matter and be especially significant to such areas as learning to think critically, learning to engage in critical dialogue, and development of research skills. It will provide an introduction to, and discussion of, the processes of historical thinking and methodology as these pertain to the work and experience of historical and living digital media artists and designers. Through the completion of studio-based projects encompassing a wide range of digital media, including image production and manipulation, basic interactivity/hypermedia, interface design, 3D modeling, animation, digital fabrication, audio, and video, students will create a portfolio of work that will enable them to make informed and guided choices as to the further focusing of their studies in the digital arts and design. Students will be introduced to various collaborative situations and approaches to be utilized as necessary based on the needs of the project. In the following year, students will build upon the explorations of this course through more focused and rigorous studio work in A&A 210 as well as other relevant courses to the degree.


Changes Effective Spring 2020:

• Description
• Abbreviation to DART
• Number to 200
• Title
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

AA 121: Design Thinking and Creativity (3 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

An introductory and multidisciplinary exploration of the theory, process, methods, and artifacts of design, achieved through an examination of ideas, examples, and applications. A&A 121 Design Thinking & Creativity (3) (GA)(BA) This course meets the Bachelor of Arts degree requirements. This course is an introductory general education level course based on the premise that design is a fundamental human activity that everyone
engages in one way or another. Design encompasses both the ability to imagine that which does not yet exist and to make it appear in concrete form. Design is a form of deliberate, considered action that seeks solutions to problems and creates useful and purposeful artifacts. Design is simultaneously used as a noun and a verb, and to describe a discipline and many fields of practice. Yet design remains essentially a black box to most people — its methods, processes, and components are mysterious, magical, and opaque. This course will turn the “black box” of design into a glass box. The course focuses on the relationship between ideas, tools, and artifacts in order to connect theory, practice, and outcomes. Using theory, practice, and artifacts from a range of design fields (including architecture, landscape architecture, product design, engineering, graphic design, environmental design, and design theory itself), the course will empower students to understand design from the perspective most useful to them and their work - ideas, application, and the things they encounter in the world. The course focuses on the kinds of problems, situations, and processes of thinking that are critical for designers, business professionals, engineers, humanists, social scientists and natural scientists. The course is divided into eight distinct units, allowing a thematic and comparative analysis of a breadth of design topics:

- What is Design?
- Design Artifacts
- Design Problems
- Creativity
- Design Thinking
- Models of the Design Process
- Design Action
- and, Design Tools and Methods

By the end of the course, students will be equipped with the necessary knowledge and skills to understand and analyze the role of design in the world and to take action themselves, including:  
- the breadth of design in the world
- the power and responsibility of design
- a range of design artifacts
- how designers think and work
- what creativity is and what it entails
- understandings of design, design thinking, and creativity
- across a breadth of disciplines
- the parts of design problems
- how the design process can be described

Changes Effective Spring 2020:

- Description

AA 210: Focused Realization Studio (3 Credits)
Old Listing Effective Through Fall 2019:

Provides students the opportunity for the realization of more focused interdisciplinary studio explorations in the digital arts and design disciplines. A&A 210 Focused Realization Studio (3) Building upon the material introduced in A&A 110: Interdisciplinary Digital Media Studio I as well as other relevant courses, such as ART 211W, students in A&A 210 will create team-based and individual studio work that investigates, from a variety of disciplinary understandings, more advanced issues and problems in the digital arts and design disciplines. This rigorous and focused exploration will result in a portfolio of completed and fully realized studio-based projects. This final portfolio will be made available online by the student, both to reach as broad an audience as possible as well as encourage the growth of a critically focused community of similarly interested practitioners in the digital arts and design disciplines. The primary purpose of the course is to bring together students engaged in a wide range of studio explorations and create a synergistic group dynamic that will inform and advance the work of all participants; hence, personal initiative and strong self-learning skills are a given expectation. The studio format is the fundamental model for education within the arts and design disciplines in the University. Ways of learning about the arts and design through projects and assignments that incorporate various technologies will be included in the course. This course also will give students knowledge of the digital arts and design disciplines, develop skills of art, design and communication, and foster a capacity for judgment. There will be an emphasis on both product and process necessitating a high level of self-motivation and initiative. Each student will be encouraged to be open to a diverse range of ideas, values and solutions.

Prerequisite: A&A 110

Changes Effective Spring 2020:

- Description
- Abbreviation to DART
- Number to 201
- Prerequisite/Corequisite/Concurrent Courses

ART 318: New Media Art: Game Art (4 Credits: Maximum of 8 Credits)
Old Listing Effective Through Fall 2019:

A studio course concentrating on game art and new media authoring practices. ART 318 New Media Art: Game Art (4 per semester/maximum of 8) This course will concentrate on creating, authoring, exhibiting, and critically evaluating interactive games as creative vehicle for self-expression. This course will focus on creative work that is exploratory and experimental and engage students in research methods to advance their skills and critical competence in new media. This course will explore the nature and potential of digital art through lectures, readings, demonstrations, studio practice, and critiques. Assignments will cover a range of digital multimedia applications in sound, image, motion, interactivity, interface design, and media authoring. The course will culminate a final interactive game authored project for presentation on the Web, CD-ROM, or DVD.

Prerequisite: ART 314, ART 315

Changes Effective Spring 2020:

- Description

ART 319: Physical Computing (4 Credits: Maximum of 8 Credits)
Old Listing Effective Through Fall 2019:

A studio course concentrating on interactive physical systems using software/sensors that can sense and respond to the analog world. ART 319 Physical Computing (4 per semester/maximum of 8) This is a course that looks at alternative techniques for engaging an audience with computer-based art, aside from the familiar monitor-mouse dialog. The course introduces students to haptic systems, interactive environments, dynamic control systems, procedural video/audio and the creation of work that is exploratory and experimental. Through readings, discussions, design of individual and collaborative projects, students are expected to develop an articulate, theoretical basis for conceptualizing and discussing works presented in class as well as their own creative projects. Assignments will cover both a technical introduction to basic electronics, analog circuit design, and microcontrollers as well as design concepts and philosophies for building interactive art objects.
Prerequisite: ART 201, and enrollment in the ART BA, ART BFA, Art Education, Interdisciplinary Digital Studio or Integrative Arts degree programs

Changes Effective Spring 2020:

• Description
• Abbreviation to DART
• Number to 405
• Prerequisite/Corequisite/Concurrent Courses
• Abbreviated Title

ART 402: Portfolio Design and Professional Practices (3 Credits)
Old Listing Effective Through Fall 2019:

This course emphasizes the development of presentation skills for digital artists in audience/client interactions. ART 402 Portfolio Design and Professional Practices (3) ART 402 PORTFOLIO DESIGN AND PROFESSIONAL PRACTICES (3) is the concluding experience for all students enrolled in the Digital Arts Certificate (DAC) program. The course provides opportunities for students to learn about the practical application of professional practices and portfolio development tools specific to careers that require knowledge of digital art and design principles and culminates in the development of a professional-quality creative portfolio. The course prepares the DAC student with the skills, knowledge, and ability to 1) communicate a critical understanding of his/her work through the articulation of goals, critique, and self-assessment; 2) identify, assess, and evaluate tools and information necessary to maintaining current and effective techniques for written and visual self-presentation; and 3) prepare and present online a professional-quality creative portfolio of digital art/design works and appropriate supporting documentation. The course is taught fully online and comprises coursework supported by online presentations and guest talks, assigned readings, and other resources and reference materials relevant to the professional development of digital artists and designers. Course topics include: 1) the role of the portfolio, 2) selecting portfolio ingredients and how to adapt them for different audiences, 3) selecting/composing supporting documentation for the creative portfolio, 4) developing a professional-level online presentation of the digital portfolio, 5) locating and evaluating resources for the digital arts/design professional and 6) identifying professional practices relevant for individuals working in digital art and design. Students engage in both individual and team-based projects and interactions via activities such as asynchronous group discussions and guest talks delivered by streaming media. Assessment is based on the quality of the student’s work and participation in individual and team-based projects and activities that include online discussions, peer-reviews, collaborative research, and the development of an online presentation for the creative portfolio. Students receive regular individual and group feedback throughout the course in the form of instructor and peer reviews and critiques. Formal assessment occurs at regular intervals in a manner that evaluates both individual and group components of assigned tasks and activities. Students are expected to positively contribute to the course through active engagement in online discussions, team-based work and activities, and peer reviews. Course assignments include creative and written components and provide multiple ways for students to engage in various forms of professional development, self-evaluation, and critique. Students are required to have access to the Internet.

Prerequisite: ART 302

Changes Effective Spring 2020:

• Description
• Abbreviation to DART
• Number to 412
• Prerequisite/Corequisite/Concurrent Courses

AA 410: Interdisciplinary Digital Studio Capstone I (4 Credits)
Old Listing Effective Through Fall 2019:

Provides arts and design students an opportunity to conceptualize a digital arts and design undergraduate thesis. A&A 410 Interdisciplinary Digital Studio Capstone I (4) This course is the first part of a two-course undergraduate digital arts and design thesis. The course will integrate particular methodologies and approaches rather than discipline-specific subject matter. Each student will have the opportunity to identify the primary issue of theoretical concern based on his/her personal interest, and pursue research in a rigorous, in-depth manner. The preparation and initiation of the digital arts and design undergraduate thesis will occur within a collaborative team-based studio environment. Students in A&A 410 will begin to research and synthesize interdisciplinary understandings through the exploration of critical, theoretical, and historical perspectives of digital media. This understanding will foster the spirit of in-depth arts and design inquiry and research, and will build upon arts and design awareness, skills, and methods introduced in previous courses. These explorations are supported by the advanced theoretical topics and ideas being presented in ART H/ART 476: History and Theory of Digital Art, which students will have already completed or will be taking concurrently. The student will integrate studio and theory while creating a significant work of digital art or design. The student will work with a faculty adviser in addition to the instructor of record for the course. The adviser will participate in the public critiques of the student’s work.

Changes Effective Spring 2020:

• Description
• Abbreviation to DART
• Number to 400
• Title
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

AA 411: Interdisciplinary Digital Studio Capstone II (4 Credits)
Old Listing Effective Through Fall 2019:

Provides arts and design students an opportunity to implement a digital art and design undergraduate thesis. A&A 411 Interdisciplinary Digital Studio Capstone II (4) This course is the second part of a two-course undergraduate digital arts and design thesis and the culmination of the digital studio sequence of A&A 110, 210, 310. The course will integrate particular methodologies and approaches rather than discipline-specific subject matter. Each student will have the opportunity to further explore the primary issue of theoretical concern based on his/her personal interest, and complete research in a rigorous, in-depth manner. The creation and implementation of the digital arts and design undergraduate thesis will occur within a collaborative team-based studio environment. Students in A&A 411 will build upon the preliminary research and studio investigations undertaken in A&A 410. The thesis will synthesize the student’s arts and design awareness, skills, and methods introduced in previous courses. The student will integrate studio and theory while creating a significant work of digital art or design, which demands a high degree of responsibility, self-motivation, and personal commitment. The student will work with a faculty adviser in addition to
the instructor of record for the course. The adviser will participate in the public critiques of the student's work.

Changes Effective Spring 2020:

- Description
- Abbreviation to DART
- Number to 401
- Title
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses

AEE 201: Interpersonal Skills for Tomorrow's Leaders (3 Credits) (GS)
Old Listing Effective Through Fall 2019:

Study of concepts of self identity, values and interpersonal relations as related to professional and personal life. AEE 201 Interpersonal Skills for Tomorrow's Leaders (3) (GS) The purpose of the course is to aid students in becoming competent in conducting interpersonal relationships in their daily life, and to help students acquire skills basic to becoming a leader in their personal life. The following topics will be addressed. A framework for interpersonal skill development sets the stage for improving one's interpersonal skill. Understanding individual differences addresses information that is the foundation of effective interpersonal relations. Interpersonal communications deals with skills in sending and receiving messages. Developing teamwork skills sensitizes the student to a vital set of skills in the workplace as well as organizations. Group problem-solving and decision making provides additional skill in collaborative efforts. Cross-cultural relations and diversity develops cross-cultural skills in the classroom, community organizations and the workplace. Resolving conflicts develops skills in finding constructive solutions to differences of opinion and disputes with others. Becoming an effective leader addresses: 1) exercising effective leadership in clubs, organizations and the workplace, 2) motivating and helping others to develop and grow through coaching, counseling and teaching, 3) using power and influence for constructive purposes, and 4) translating ethical behaviors into usable skills. Each class meeting will focus on one or more concepts related to leadership and interpersonal skill development. Students will be provided a number of experiential activities that help them practice a particular set of skills. In addition, students will be required to complete a service learning project applying their leadership and interpersonal skills with individuals in the community who are in need of their help.

Changes Effective Spring 2020:

- Description

AFR 110: Introduction to Contemporary Africa (3 Credits) (IL) (BA) (GS)
Old Listing Effective Through Fall 2019:

Consideration of influences and forces shaping modern African society; analysis of current local and global problems and issues facing Africa.

Changes Effective Spring 2020:

- Description
- Add GH Designation
- Add Inter-Domain Designation
- Number to 110N

AFR 209: Poverty in Africa (3 Credits) (IL) (GS)
Old Listing Effective Through Fall 2019:

The course examines the causes, consequences, and dynamics of poverty in African countries.

Cross-Listed Courses: SOC 209

Changes Effective Spring 2020:

- Description

AGECO 122: Atmospheric Environment: Growing in the Wind (3 Credits) (GN)
Old Listing Effective Through Fall 2019:

Students will learn about the effect of weather on plants, animals, and humans. METEO 122 Atmospheric Environment: Growing in the Wind (3) (GN) Atmospheric Environment: Growing in the Wind is for first-year students who are interested in learning about the atmospheric environment and its influence on animals, plants, and humans. It is about how processes at the ground surface and in the air govern weather conditions on Earth. Growing in the Wind focuses on five major weather elements: energy, temperature, moisture, pressure, and wind and how these factors govern ecosystems and habitation of Earth. Emphasis is also given to human impacts on weather and climate. The lectures (2, one-hour lectures each week) are organized around the central theme that the unequal distribution of incoming solar energy (both spatially and temporally) produces temperature and pressure contrast at the Earth's surface and in the atmosphere that in turn cause storms and control the weather and climate. Computer lab exercises (1, two-hour lab each week) will reinforce concepts learned in lecture. No prerequisites are required. A sincere interest in the environment helps. The course will be offered each fall semester.

Cross-Listed Courses: METEO 122

Changes Effective Spring 2020:

- Description
- Abbreviated Title

AGECO 134: Sustainable Agriculture Science and Policy (3 Credits) (BA) (GN)
Old Listing Effective Through Fall 2019:

The science, socio-economics, and politics of managing food and fiber production systems. Sustainability implications of current practices and future options. AGECO 134 / RSOC 134 Sustainable Agriculture Science and Policy (3) (GN) This general education course will teach students about the soil, plant, animal, and ecological sciences; technologies, and policies of our agroecosystems in an integrated manner. We will examine agricultural resources and options available for sustainable management of resources for food production. Students will have many opportunities to examine and critically analyze scientific knowledge and policies during discussions, writing exercises, and role playing to develop analytical and communication skills. There are no prerequisites for this course. This course can link with other courses that address how research and efforts in agricultural sciences, ecology, policy, economics, philosophy, education, and communication influence sustainable management of natural resources for the present and the future.

Cross-Listed Course: RSOC 134
Changes Effective Spring 2020:

- Description
- Change Number to 134N
- Add GN Designation
- Add Inter-Domain Designation
- Remove BA Designation
- Remove RSOC Cross-Listing

**AGECO 144: Principles and Practices of Organic Agriculture (3 Credits) (GN)**

**Old Listing Effective Through Fall 2019:**

An introduction to the science, principles and practices of organic agricultural systems for food production. AGECO 144 Principles and Practices of Organic Agriculture (3) (GN)This general education course will teach students about the science of agroecology, with a focus on organic agriculture. We will examine the science, history and development of organic agriculture and its principles and practices. Students will learn about the scientific basis and implementation of fundamental organic farming principles and practices including soil health, diversified cropping systems, organic pest management, and a system perspective. We will also discuss certified organic regulations and policies, organic farming business management and marketing. Learning activities will include: i) reading and discussing agricultural scientific articles, ii) listening to guest speakers and videos, iii) hands-on laboratory and greenhouse activities, iv) attending a field trip, and v) two group projects. The only prerequisite for this course is a high school level biology or ecology course. This course can link with other courses that address the agricultural sciences, food systems, environmental resource management and policy, landscape management and design, and natural resources. Student learning will be evaluated from class participation, questions on reading assignments, short papers and presentations, and a group project and presentation conducted by student teams.

Changes Effective Spring 2020:

- Description

**AIR 151: The Foundations of the United States Air Force I (2 Credits)**

**Old Listing Effective Through Fall 2019:**

Survey course designed to introduce students to Air Force opportunities, officership, professionalism, and military customs and courtesies, and communication skills.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

**AIR 152: The Foundations of the United States Air Force II (2 Credits)**

**Old Listing Effective Through Fall 2019:**

Continued study of officership and leadership. Mission and organization of today’s Air Force are discussed.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

**AMST 100: Introduction to American Studies (3 Credits) (GH) (US) (BA)**

**Old Listing Effective Through Fall 2019:**

A study of selected attempts to identify and interpret movements and patterns in American culture. AMST 100 Introduction to American Studies (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. AMST 100 is a broad-ranging introduction to American culture. While specific topics may vary from class to class, the course examines what "America" means and what it means to be "American." These issues will be examined from a variety of perspectives: literature, history, politics, film, race, gender, and geography. The course is often broken down into discussion sections to facilitate student discussion of the material and the lecture. Requirements generally include community service projects, and students will be evaluated on essay tests, papers, journal entries and attendance. AMST 100 (or AMST 105) is a requirement for the American Studies major and minor, and offers students valuable experience in critical thinking, analysis, and writing. Non-American Studies majors and minors may use this course to fulfill a general education or Bachelor of Arts-Humanities credits. The course offers students a broad introduction to American culture, also serves as preparation for more advanced courses in American studies, American literature, and American history, in particular.

Prerequisite: third-semester standing

Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

**ANSC 213: Introduction to Animal Biotechnology (3 Credits)**

**Old Listing Effective Through Fall 2019:**

This course provides an early exposure to the emerging and diverse field of animal biotechnology. Basic principles underlying recombinant DNA technology, genetics, gene transfer technology, genomics and their technological applications will be discussed. This course is taught from the technological perspective that differs from the perspectives of basic science, or technique-oriented courses. The information provided in the required text-book, accompanying websites and current literature will be discussed extensively in the form of formal lectures, tutorials and review sessions.

Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

**ANSC 327: Horse Production and Management (3 Credits)**

**Old Listing Effective Through Fall 2019:**

Principles of selection, breeding, feeding, management, and marketing of horses; emphasis on light horses.

Prerequisites: ANSC 201

Changes Effective Spring 2020:
ANTH 11: Introductory North American Archaeology

Old Listing Effective Through Fall 2019:

Introduction to archaeology of the North American Indians; sites, methods, and results of research interpreted in cultural history.

Changes Effective Spring 2020:

• Description
• Credits

ANTH 83: First-Year Seminar in Anthropology (3 Credits) (BA) (GS) (FYS)

Old Listing Effective Through Fall 2019:

This seminar introduces students to anthropology as a scientific discipline with ties to other social and natural sciences. ANTH 83 First-Year Seminar in Anthropology (3) (GS;FYS)(BA) This course meets the Bachelor of Arts degree requirements. This seminar introduces students to anthropology as a scientific discipline with ties to other social and natural sciences. Through active participation in the seminar, students will be exposed to an aspect of anthropology that corresponds to a faculty member’s area of expertise. Because students are introduced to cutting edge research, the course content will vary from one semester to the next. Seminar topics highlight current debates in the discipline and the research process. Research design, analytical methods, and sampling issues are covered by having students read and discuss new and controversial developments in anthropology. Strong emphasis is placed on the broader sociocultural significance of scholarly research related to the seminar’s principal focus. Student comprehension of topics raised in class will be assessed by classroom participation, exams, and papers. In addition to the academic topic and issues of this course, students can expect to gain a general introduction to the University as an academic community and have the opportunity to explore their responsibilities as members of that community. Students will develop an understanding of the learning tools and resources available to them, including the opportunity to develop relationships with faculty and other students who share their academic interests. This seminar fulfills both a first-year seminar requirement and a general education sociobehavioral science requirement or Bachelor of Arts sociobehavioral science requirement.

Changes Effective Spring 2020:

• Description
• Number to 83S

ANTH 120: First Farmers (3 Credits) (IL) (BA) (GS)

Old Listing Effective Through Fall 2019:

Cross-cultural comparison of the origins of plant and animal domestication and the earliest farming societies.

Changes Effective Spring 2020:

• Description

ANTH 223: European Prehistory (3 Credits) (IL) (BA) (GS)

Old Listing Effective Through Fall 2019:

The prehistory of European societies from the Upper Palaeolithic to the Iron Age. ANTH 223 European Prehistory (3) (GS;IL)(BA) This course meets the Bachelor of Arts degree requirements. This class explores the archaeological record of human societies in Europe from the Upper Palaeolithic to the Iron Age, spanning a 40,000-year period. Many archaeological sites, such as Stonehenge, are widely known but often misunderstood or sensationalized. ANTH 223 will trace the history of humans in Europe and provide the cultural, chronological, and environmental contexts to understand these places on the landscape. The class explores the extinction of Neanderthals and Pleistocene animals, the origins of art, the transition to agriculture, the beginnings of metallurgy, and the rise of complex societies. Emphasis is placed on the evidence for subsistence and production, funerary rites, changes in settlement, production of art, symbolism, the role of technology, and emergence of social hierarchies. The course introduces students to archaeological and anthropological concepts by viewing cultural groups in ecological and social context, and highlighting the variability of human adaptations to shifting climates and natural and social environments. This course will fulfill basic BA and GenEd requirements (GS, IL). It may also be used to fulfill an ANTH, ARSCI, and BANTH additional ANTH course requirement.

Prerequisite: 3 credits in 100 level or below ANTH course

Changes Effective Spring 2020:

• Description
• Change Number to 223N
• Add GA Designation
• Add Inter-Domain Designation

APLNG 200: Introduction to Language, Culture, and Social Interaction (3 Credits) (IL) (GH)

Old Listing Effective Through Fall 2019:

Introduction to the interrelationships among language, culture, and social interaction and their fundamental links to social identities and discourse communities.

Changes Effective Spring 2020:

• Description

APLNG 210: The Ecology of Global English (3 Credits) (IL) (GH)

Old Listing Effective Through Fall 2019:

This course explores how English language enables globalization processes and how globalization changes the structure, norms, and usage of English.

Changes Effective Spring 2020:

• Description

ARCH 210: Introduction to Architecture and Planning Theories (3 Credits) (BA) (GA)

Old Listing Effective Through Fall 2019:

The course introduces architectural and urban theory by presenting and exploring key concepts through major texts from the Western tradition. ARCH 210 Introduction to Architecture and Planning Theories (3) (BA) This course meets the Bachelor of Arts degree requirements. The course introduces architectural and urban theory by presenting and exploring key concepts through major texts from the Western tradition. ARCH 210 covers a period ranging from ancient Greece and Rome to the
ART 202: Computer 3-Dimensional Modeling and Rendering (3)

Changes Effective Spring 2020:

- Description
- Abbreviation to DART
- Number to 203
- Title
- Abbreviated Title

ART 203: The Art of Web Design (3 Credits) (BA)
Old Listing Effective Through Fall 2019:

This course will focus on utilizing graphic formats ideal for web-based work and designing with web standards. ART 203 The Art of Web Design (3)(BA) This course meets the Bachelor of Arts degree requirements. ART 203 is a 200-level course for the New Media area of concentration in the School of Visual Arts, and will focus on working with different graphic formats, both bitmap and vector based, which work on the web and on designing with web standards to assure accessibility and effective communication of information in a variety of forms. This course will teach how to meet the present government standards for accessibility by the disabled and the technical and accessibility standards recommended by the World Wide Web Consortium (W3C). The web as a global communication medium will be discussed, with special consideration given to the presentation of sites using languages other than English. The course will also emphasize the various uses of images to present information in different ways, in a variety of formats - gif, jpg, png, swf and svg - to learn which is the most effective for the particular information being presented. The use of text and typography for communication and how these can make artwork on the web more effective will also be examined. Clarity and flexibility of art and design, ease of use and creating web-optimized files that download quickly will be other subjects of concern. There will also be examples and discussion of artists and designers currently using the web, how communication on the web can work well, how it can work badly and how it can be abused.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title
- Abbreviation to DART
- Number to 206
- Removed BA Designation

ART 204: Animation Fundamentals (3 Credits)
Old Listing Effective Through Fall 2019:

This course provides foundational knowledge for creating animated works that communicate ideas, enhance user interaction, and inspire critical reflection. ART 204: Animation Fundamentals focuses on creative work that is grounded in fundamentals and engages students in research methods to advance their skills and critical competence in time-based media. Students are introduced to core skills and knowledge necessary for producing animated works that communicate ideas, enhance user interface and interaction, and inspire critical reflection. Through a series of animation exercises students apply visual digital concepts in the creation of original animated projects that are further enhanced by critical responses to screenings and discussions of key texts about animation. Initial exercises cover animation principles and
tools, creating assets, production planning, layout and composition, keyframes, transformation and deformation, and interpolation. Character animation design and development, rigging, asset preparation, camera are covered, along with various forms of interface prototypes such as interaction design, wireframes, interface elements. Students are also introduced to typography, sound design and Foley, motion design, color, masking, post effects, and color grading. Later in the course, students also develop a series of more ambitious animation projects using an iterative design process that further develops their digital competencies and creative and critical capabilities in time-based media.

Changes Effective Spring 2020:
- Description
- Abbreviation to DART

ART 302: Digital Portfolio Elements (3 Credits)
Old Listing Effective Through Fall 2019:

The creation of more involved digital projects that may ultimately be included in the students’ digital portfolio. ART 302 Digital Portfolio Elements (3) ART 302 DIGITAL PORTFOLIO ELEMENTS (3) This course utilizes relevant digital tools for the completion of more involved projects that may ultimately be included in the students’ digital portfolio. Through completion of the course, students will gain increased ability and independence in the application of relevant digital tools. The structure of the assignments and overall course will prepare and guide the students towards increased professionalism.

Changes Effective Spring 2020:
- Description
- Abbreviation to DART
- Number to 300
- Prerequisite/Corequisite/Concurrent Courses

ART 315: New Media Art: New Media Studio (4 Credits) (BA)
Old Listing Effective Through Fall 2019:

A studio course concentrating on digital art and new media authoring practices. ART 315 New Media Art: New Media Studio (4)(BA) This course meets the Bachelor of Arts degree requirements. This is a studio art class that focuses on creating, authoring, exhibiting, and critically evaluating interactive multimedia artworks. The course explores experimental uses of new media in the visual arts with emphasis on integrating digital media with current studio practices in two-, three-, and four-dimensional art. In addition to the actual creation of new media artworks, the course will engage students in research methods to advance their skills in new media and help them to develop an understanding of the critical evaluation and assessment of new media artworks. This course will explore the nature and potential of digital video art making through lectures, readings, demonstrations, studio practice, and critiques. Assignments will cover a range of digital video authoring applications central to video and time-based arts production. The course will culminate in a video art screening/exhibition of student work.

Prerequisite: ART 315

Changes Effective Spring 2020:
- Description
- Abbreviation to DART
- Number to 314
- Prerequisite/Corequisite/Concurrent Courses

ART 316: Video Art and Time-Based Media (4 Credits: Maximum of 8 Credits) (BA)
Old Listing Effective Through Fall 2019:

A studio course concentrating on video art, new media, and experimental time-based work. ART 316 Video Art and Time-Based Media (4 per semester/maximum of 8)(BA) This course meets the Bachelor of Arts degree requirements. ART 316 is a studio art class that focuses on creating, authoring, exhibiting, and critically evaluating video and time-based arts. This new media course explores experimental uses of video by visual artists with an emphasis on integrating digital video into current studio practice (i.e., new media digital arts, mixed media, installation, and performance). The course will engage students in research methods to advance their skills in time-based media and to help them develop an understanding of the critical evaluation and assessment of video and time-based artworks. This course will explore the nature and potential of digital video art making through lectures, readings, demonstrations, studio practice, and critiques. Assignments will cover a range of digital video authoring applications central to video and time-based arts production. The course will culminate in a video art screening/exhibition of student work.

Prerequisite: ART 315

Changes Effective Spring 2020:
- Description
- Abbreviation to DART
- Number to 314
- Prerequisite/Corequisite/Concurrent Courses

ARTH 1: First-Year Seminar (3 Credits) (BA) (GA) (FYS)
Old Listing Effective Through Fall 2019:

An introduction to the field of art history, through an examination of a selected issue in a seminar setting. ART H 001S First-Year Seminar (3)(GA)(BA) This course meets the Bachelor of Arts degree requirements. This First-Year Seminar is open to all majors and to those who have yet to decide upon a major. It is also a 3-credit General Education in the Arts course (GA). The course will introduce entering university students to the field of art history through a case study on a selected topic. Each semester the topic will be different, potentially covering such diverse subjects as the purpose and function of Ancient Egyptian architecture to the role of sculpture in Renaissance Florence to the development of abstract painting in the early 20th century. Some semesters, the seminar may also focus upon a single exhibition at the Palmer Museum of Art. Such a focus upon a single topic will allow the class to look at a particular issue in the field from many different perspectives. The course will not be a broad survey of the history of art, but it will introduce students to the breadth of methods and approaches of art history. The seminar approach of the course will emphasize how to tackle an issue in art history, how to critically read selected texts, how to discuss in a small group the various dimensions of a problem, how to do art historical research in the library and on the internet, and how to present your own research and perspectives through public speaking and writing.

Changes Effective Spring 2020:
ARTH 100: Introduction to Art (3 Credits) (GA) (IL) (BA)
Old Listing Effective Through Fall 2019:

An approach to the understanding of art through a critical analysis of selected works of architecture, painting, and sculpture. Students who have passed ARTH 110 may not schedule this course. ART H 100/ART H 100 Introduction to Art (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 100 provides an introduction to the history of art from prehistory to the present, through selected topics, rather than a comprehensive survey. Areas covered usually include prehistoric art, art of the Near East and Egypt, ancient Greek and Roman art, medieval art culminating with the Gothic, Renaissance art both in Italy and northern Europe, Baroque and Rococo art, and modern developments often highlighting Romanticism, Impressionism, Cubism, Dada, Surrealism, Abstract Expressionism, Pop, Feminist, and contemporary art. The course also introduces selected artistic traditions in Africa, Asia and the Americas. The course is designed to meet two principal goals. The first is to increase students' powers of visual analysis and to help them build a critical vocabulary for discussing an art object's medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts, both historical and contemporary. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship. It considers such intra- and cross-cultural issues as representations of gender and the incorporation of non-European art forms into the Western tradition. Typical requirements include exams and a paper. As a general education course in the arts, this course provides an introduction to Ancient through Medieval art to a student of any major. It has no prerequisite and presumes no prior exposure to art history. As a course in the Art History major, it teaches students both the common vocabulary of the field and the outlines of the field that form the foundation for future study. Art History 111 serves as a companion course to Art History 112, which deals with art from the Renaissance to Modern Times. Art History 111 also complements Art History 201, "Ancient to Medieval Architecture."

Changes Effective Spring 2020:

• Description

ARTH 111: Ancient to Medieval Art (3 Credits) (GA) (IL) (BA)
Old Listing Effective Through Fall 2019:

Survey of ancient Egyptian, Greek, Roman, Byzantine, Early Medieval, Romanesque, and Gothic art, with an emphasis on sculpture and painting. ART H 111/ART H 111 Ancient to Medieval Art (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. This course is an introduction to Western art before the Renaissance, from ca. 25,000 BCE to AD 1423. The topics covered in this course include prehistoric art in Europe; art of the Near East and Egypt; Aegean art; Greek and Roman art; Early Christian, Jewish, Islamic and Byzantine art; and Medieval art including Romanesque and Gothic developments. The course is designed to meet two principal goals. The first is to increase students' powers of visual analysis and to help them build a critical vocabulary for discussing an art object's medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship.

Changes Effective Spring 2020:

• Description

ARTH 112: Renaissance to Modern Art (3 Credits) (IL) (BA) (GA)
Old Listing Effective Through Fall 2019:

Survey of Renaissance, Baroque, Rococo, Romantic, Modern, and Contemporary art, with an emphasis on painting, sculpture, and graphic arts. ART H 112/ART H 112 Renaissance to Modern Art (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 112 provides an introduction to the history of art in the European tradition from the early Renaissance (ca. 1300) to the present. Areas covered include Early and High Renaissance Italian art; Northern Renaissance art; Baroque art of Italy, Spain, France and the Netherlands; and subsequent artistic movements emphasizing the Rococo, Neo-Classicism, Realism, Impressionism and Modernist movements from Fauvism through Abstract Expressionism to Contemporary. The course is designed to meet two principal goals. The first is to increase students' powers of visual analysis and to help them build a critical vocabulary for discussing an art object's medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts, both historical and contemporary. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship. It considers such intra- and cross-cultural issues as representations of gender and the incorporation of non-European art forms into the Western tradition. Requirements typically include examinations combining short answer and essay questions, and at least one writing assignment. As a general education course in the arts, this course provides an introduction to Renaissance through modern art for a student in any major. It has no prerequisite and presumes no prior exposure to art history. It will teach students majoring in Art History both the common vocabulary of the field and the outlines of the field that form the foundation for future study. Art History 112 serves a companion course to Art History 111, which examines Western art from Antiquity through the Middle Ages. Art History 112 also complements Art History 202, "Renaissance to Medieval Architecture."

Changes Effective Spring 2020:

• Description

ARTH 120: Asian Art and Architecture (3 Credits) (IL) (BA) (GA)
Old Listing Effective Through Fall 2019:

A selective overview of the art and architecture of India, Southeast Asia, China, Korea, and Japan. ART H 120/ART H 120 Asian Art and Architecture (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 120 provides an introduction to the art and architecture of Asia, with an emphasis upon south, southeast, and
east Asia. Selected monuments from these regions will be considered within their original cultural and historical context. Particular emphasis will be placed on the art associated with Hinduism and Buddhism. The course begins with India, from the early Indus Valley Civilization up through the Taj Mahal. Angkor Wat and other developments in southeast Asia are examined. Selected themes in Chinese art and architecture are explored from the early Bronze Age up through the Forbidden City in Beijing. The unique contribution of Korean art is included. The course concludes with a discussion of Japanese art and architecture, from early Shinto shrines to Japanese prints, gardens, and the tea ceremony. The course is designed to meet two primary goals. The first is to develop skills of visual analysis and a critical vocabulary for discussing the media, technologies, styles, and iconographies of various Asian artistic traditions. The second is to foster an understanding of art—and visual culture in general—according to social, economic, political, and religious contexts. Key topics include: patronage, issues of reception and aesthetics, the function of visual imagery in religious practices, the ritual use of objects, the organization and use of sacred space, depictions of gender, and relationships between the art of various regions and cultures. Requirements include essay exams and a paper. As a general education course, this class provides an introduction to Asian art for students of any major. The course has no prerequisites, and presumes no prior exposure to art history. Art History majors will learn vocabulary, methodology, and theory that is not only basic to the field, but which will also broaden their knowledge of the discipline as a whole.

Changes Effective Spring 2020:

- Description

**ARTH 201: Ancient to Medieval Architecture (3 Credits) (GA) (IL) (BA)**

Old Listing Effective Through Fall 2019:

A survey of Prehistoric, Ancient Near Eastern Egyptian, Greek, Roman, Early Christian, Byzantine, Early Medieval, Romanesque, and Gothic architecture. ART H 201 Ancient to Medieval Architecture (3) (GA;IL) (BA) This course meets the Bachelor of Arts degree requirements. This course is an introduction to Western architecture before the Renaissance, roughly before A.D. 1400. Some of the topics covered in this course include prehistoric architecture in Europe and the Mediterranean, architecture of the ancient Near East, Egyptian architecture, Minoan and Mycenaean architecture, the classical architecture of ancient Greece, ancient Roman architecture throughout the empire, the Early Christian architecture of western Europe and Byzantium, early medieval architecture, Middle Byzantine architecture, Islamic architecture, and the Romanesque and Gothic architecture of Western Europe. Selected major individual buildings and architectural complexes will be emphasized and will include types of buildings/complexes such as the sanctuary, temple, tomb, forum, basilica, cathedral, monastery, and castle. Architecture will be analyzed with regard to materials' construction, engineering and design, and in the contexts of culture, society, and urban or rural setting. Political, economic, religious, ethnic and gender-related issues will be presented as they are part of the dynamics contributing to many of these structures. The students' understanding and ability to articulate the conceptual themes of the course will be tested through essay examinations. There will also be a short paper. This course will provide an introduction to Renaissance to contemporary architecture to students of any major. The course has no prerequisite. This course also serves as an introductory foundation course for students in the arts, particularly architecture and landscape architecture. The companion course to Art History 201 is Art History 202, "Renaissance to Modern Architecture," which examines Western architecture after A.D. 1400. Art History 201 is a required course for the Major in Art History and the Interdisciplinary Minor in Architectural History.

Changes Effective Spring 2020:

- Description

**ARTH 202: Renaissance to Modern Architecture (3 Credits) (US) (IL) (BA) (GA)**

Old Listing Effective Through Fall 2019:

A survey of Renaissance, Baroque, Rococo, Romantic, Victorian, Modern, Post-Modern, and Contemporary architecture in Europe and America. ART H 202 Renaissance to Modern Architecture (3) (GA;US;IL) (BA) This course meets the Bachelor of Arts degree requirements. This course is an introduction to Western architecture from approximately A.D. 1400 to the present. Some of the topics covered in this course include the Italian Renaissance, the rebuilding of St. Peter's in Rome, Mannerism, the villas of Palladio, Italian Baroque churches, Spanish Colonial architecture in the Americas, royal French architecture from Francis I to Louis XVI, Late Baroque and Rococo architecture from Bavaria to Russia, Elizabethan to Georgian architecture in England and America, the Industrial Revolution, Neoclassicism from Schinkel to Jefferson, Romanticism and the Gothic Revival, Ecole des Beaux-Arts, Second Empire Paris, Victorian architecture, the Arts & Crafts Movement, Richardsonian Romanesque, the Chicago School, Frank Lloyd Wright, the City Beautiful Movement, Art Nouveau to Futurism, Art Deco skyscrapers, the International Style, the Bauhaus, Le Corbusier, Louis 1. Kahn, PostModernism, Deconstructionism, and contemporary architecture. Selected major architects, theories, buildings, and urban developments will be emphasized. Architecture will be considered within the contexts of religion, politics, philosophy, culture, economics, race, gender, society, engineering, and landscape architecture. The students' understanding of the basic factual information concerning selected buildings will be tested through quizzes. The students' understanding and ability to articulate the conceptual themes of the course will be tested through essay examinations. There will also be a short paper. This course will provide an introduction to Renaissance to contemporary architecture to students of any major. The course has no prerequisite. This course also serves as an introductory foundation course for students in the arts, particularly architecture and landscape architecture. The companion course to Art History 202 is Art History 201, "Ancient to Medieval Architecture," which examines Western architecture before A.D. 1400. Art History 202 is a required course for the Major in Art History and the Interdisciplinary Minor in Architectural History.

Changes Effective Spring 2020:

- Description

**ARTH 302: Art of the Early Middle Ages (3 Credits) (IL) (BA) (GA)**

Old Listing Effective Through Fall 2019:

A survey of the art of Western Europe from the Early Christian era through the Ottonian Empire, c.300-1050 A.D. ART H 302 ART H 302 Art of the Early Middle Ages (3) (GA;IL) (BA) This course meets the Bachelor of Arts degree requirements. Art History 302 concentrates on the art of northern Europe between A.D. 600 and 1050, from the years which saw the art and culture of the migration period in Europe meet and merge with the Greco-Roman traditions of the Mediterranean, to the beginnings of Romanesque
art. Works studied include architecture, manuscript painting, ivory carving and goldsmithwork, most of which were produced by or for members of the clergy, royalty or the lay aristocracy. The basic structure of the course is chronological. The course is designed to meet two principal goals. The first is to increase students’ powers of visual analysis and help them build a critical vocabulary for discussing an art object’s medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship. It considers such intra- and cross-cultural issues as representations of gender. Requirements include essay exams and at least one paper. As a general education course in the arts, this course provides an introduction to early Medieval art to a student of any major. This course has no prerequisite, and presumes no prior exposure to art. Students majoring in Art History will learn it both the common vocabulary of the field and the outlines of the field that form the foundation for future study.

Changes Effective Spring 2020:

• Description
• Abbreviated Title
• Title

ARTH 303: Italian Renaissance Art (3 Credits) (IL) (BA)
Old Listing Effective Through Fall 2019:

The major arts in Italy from the thirteenth century A.D. through the Renaissance; emphasis on sculpture and painting. ART H 303ART H 303 Italian Renaissance Art (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 303 provides an introduction to the art of the early and "high" Renaissance in Italy, conceived in chronological terms as the period from c. 1300 to c. 1530, and embracing developments from the emergence of the Mendicant orders on the later 13th century to the rise of Mannerism in the 16th century. Monuments form all parts of the Italian peninsula will be considered, with emphasis on the major centers of Florence, Siena, Venice, Rome, Milan, and Naples, as well as Mantua, Ferrara and Urbino. The basic structure of the course is chronological, and is divided into three sections corresponding to the three centuries deigned by Giorgio Vasari in his Lives of the Artists. In each section, an attempt will be made to present the careers and major works of the most significant artists in relation to their historical and cultural context. The course is designed to meet two principal goals. The first is to increase students’ powers of visual analysis and help them build a critical vocabulary for discussing an art object’s medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship. It considers such intra- and cross-cultural issues as representations of gender. Requirements include essay exams and at least one paper. As a general education course in the arts, this course provides an introduction to Italian Renaissance art to a student of any major. This course has no prerequisite, and presumes no prior exposure to art. Students majoring in Art History will learn it both the common vocabulary of the field and the outlines of the field that form the foundation for future study.

Changes Effective Spring 2020:

• Description

ARTH 305: Romanticism and Revolution (3 Credits) (IL) (BA) (GA)
Old Listing Effective Through Fall 2019:

A survey of painting and sculpture in Europe 1780-1860, from the origins of Neoclassicism through Romanticism and Realism. ART H 305ART H 305 European Art from 1780-1860 (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 305 provides an introduction to the painting, sculpture, and graphic arts of Europe between ca. 1780 and 1860, with an emphasis on selected developments in France, Spain, England, and Germany. The course begins with the origins of Neoclassicism and the revolutionary art of Jacques Louis David. Art is examined within the context of the tumultuous history of this period, such as the decline of the French monarchy, the French Revolution and the rise and fall of Napoleon. The course will examine the rise of Romanticism, as seen in such diverse expressions as Goya's horrific images of inhumanity, Fuseli's dreams, Turner's sublime landscapes, Friedrich's frozen visions of Gothic ruins, Delacroix's colorful battles of beasts. Realism emerges in the biting social commentaries of Daumier, the meticulous detailed paintings of the English Pre-Raphaelites, and the raw reality of Courbet's paintings. The course ends with the extraordinary art of Manet. The course is designed to meet two principal goals. The first is to increase students’ powers of visual analysis and help them build a critical vocabulary for discussing an art object’s medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship. It considers such intra- and cross-cultural issues as representations of gender. Requirements include essay exams and at least one paper. As a general education course in the arts, this course provides an introduction to European art, 1780-1860, to a student of any major. This course has no prerequisite and presumes no prior exposure to fine art. Students majoring in Art History will learn both the common vocabulary of the field and the outlines of the field that form the foundation for future study.

Changes Effective Spring 2020:

• Description

ARTH 312: Romanesque and Gothic Art (3 Credits) (IL) (BA) (GA)
Old Listing Effective Through Fall 2019:

Survey of the architecture, sculpture, and painting of the Christian church in western Europe from 1000 to 1500. ART H 312ART H 312 Romanesque and Gothic Art (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 312 concentrates on the art of northern Europe between A.D. 1000 and 1500, from Ottonian art to Romanesque art continuing to the beginnings of Gothic art. Works studied include architecture, manuscript painting, ivory carving and goldsmithwork, most of which were produced by or for members of the clergy, royalty or the lay aristocracy. The basic structure of the course is chronological. The course is designed to meet two principal goals. The first is to increase students’ powers of visual analysis and help them build a critical vocabulary for discussing an art object’s medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship. It considers such intra- and cross-cultural issues as representations of gender. Requirements include essay exams and at least one paper. As a general education course in the arts, this course provides an introduction to Romanesque and Gothic art to a
student of any major. This course has no prerequisite, and presumes no prior exposure to fine art. Students majoring in Art History will learn in it both the common vocabulary of the field and the outlines of the field that form the foundation for future study.

Changes Effective Spring 2020:

- Description
- Abbreviated Title

ARTH 315: Architecture and Art of South and Southeast Asia (3 Credits) (GA) (IL) (BA)
Old Listing Effective Through Fall 2019:

Survey of the architecture/art of South/Southeast Asia (emphasis on India) from the Bronze Age to a globalizing present. ARTH 315 /ASIA 315 Architecture and Art of South and Southeast Asia (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. This course has a focus on the architecture and art of South Asia (India, Pakistan, and Bangladesh) and Southeast Asia (particularly Thailand, Cambodia, and Indonesia). Topics will span a time period that begins with Bronze age urbanization in South Asia and concludes with the emergence of globalized architecture in the context of modern nation states. The course will be an opportunity for students to engage with artistic traditions and patronage systems that have adapted to cross-cultural currents, including the more recent forces of colonialism and globalization. Early Buddhist and Hindu architecture and sculpture, the medieval Hindu temple, the advent and adoption of Islam and its artistic forms, the emergence of an early modern empire under the Mughals and their patronage of architecture and painting, British colonial architecture and contemporary interpretations of Modernist architecture and art, are some of the topics that will be covered. Besides paying attention to the formal aspects of buildings, cities and objects, lectures will incorporate information on the emergence of Art History as a discipline in South and Southeast Asia. Lectures, exams and reading assignments will aid in providing students with an intensive introduction to the region's cultural and artistic diversity.

Changes Effective Spring 2020:

- Description
- Abbreviated Title
- Number to 215
- Crosslist Number to ASIA 215

ARTH 320: Chinese Art (3 Credits) (BA)
Old Listing Effective Through Fall 2019:

A general survey of the great periods of Chinese art from the Shang dynasty until the modern period. ART H 320 ART H 320 Chinese Art (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 320 provides an introduction to the art of China from the Neolithic period through the twentieth century. Emphasis will be placed on the major dynastic periods (Shang, Zhou, Qin, Han, Tang, Song, Ming, Yuan, and Qing); however, regional developments throughout China are examined as well. Students are introduced to a variety of artistic traditions and media, including jades, bronzes, ceramics, sculpture, painting, and architecture. The course is designed to meet two principal goals. The first is to develop skills of visual analysis and a critical vocabulary for discussing the media, technologies, styles, compositions and iconographies of Chinese art. The second is to foster an understanding of art—and visual culture in general—according to social, economic, political, and religious contexts. Key topics include: the ritual use of objects, patronage, issues of reception and aesthetics, Buddhist art, the organization and use of sacred space, depictions of gender, and regional developments/interactions. Requirements include essay exams and at least one paper. As a general education course, this class provides an introduction to Chinese art for students of any major. This course has no prerequisites and presumes no prior exposure to art history or the history of China. Students majoring in Art History will learn vocabulary, methodology, and theory that is not only basic to the field, but which will also broaden their knowledge of the discipline as a whole. Because China (currently the world's most populous nation) has one of the longest recorded and continuous artistic traditions, the course also contributes to a broader understanding of important global issues.

Changes Effective Spring 2020:

- Description
- Number to 220

ARTH 325: Impressionism to Surrealism (3 Credits) (IL) (BA) (GA)
Old Listing Effective Through Fall 2019:

A survey of European painting and sculpture from ca. 1850 to ca. 1940. ART H 325 ART H 325 Impressionism to Surrealism (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 325 is a survey of European painting and sculpture from approximately 1860 to the Nazi occupation of Paris in 1940. This course will provide an introduction to Impressionism (Manet, Monet, Renoir, Morisot), Post-Impressionism (Seurat, Cezanne, van Gogh, Gauguin), Symbolism, the Nabis, Edward Munch, Rodin, Fauvism (Matisse), Cubism (Braque, Picasso), Italian Futurism (Boccioni), Expressionism (Kirchner, Kandinsky), Dada (Duchamp), De Stijl (Mondrian), Suprematism (Malevich), Russian Constructivism (Tatlin), the Bauhaus, Paul Klee, Marc Chagall, and Surrealism (Ernst, Miro, Dalí). The course will close with the Nazi's “Degenerate Art” exhibition of 1937 and the Second World War. The course is designed to meet two principal goals. The first is to increase students' powers of visual analysis and help them build a critical vocabulary for discussing an art object's medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship. It considers such intra- and cross-cultural issues as representations of gender. Requirements include essay exams and at least one paper As a general education course in the arts, this course provides an introduction to European art to a student of any major. This course has no prerequisite, and presumes no prior exposure to fine art. Students majoring in Art History will learn in it both the common vocabulary of the field and the outlines of the field that form the foundation for future study.

Changes Effective Spring 2020:

- Description

ARTH 330: Islamic Architecture and Art (3 Credits) (IL) (BA)
Old Listing Effective Through Fall 2019:

Survey of the art and architecture of Islamic lands from the late seventh century until the eighteenth century. ART H 330 ART H 330 Islamic Architecture and Art (3) (GA;IL)(BA) This course meets the Bachelor of Arts degree requirements. Art History 340 provides an introduction to the arts of Islam from its birth and early formation in the seventh-eighth centuries to the eighteenth century through the examination of architecture, painting and calligraphy, and the decorative arts.
The focus is on the traditional Islamic areas including Spain, North Africa, the Middle East, and South Asia, although the spread of Islam to other regions (e.g., Southeast Asia and especially Indonesia, the world's most populous Islamic country) may also be included. Each of the major traditions of Islamic art will be examined in a generally chronological sequence; these include the Abbasids, the Ummayads of Spain, the Fatimads of Egypt, the Seljuqs, the Ilkhanids (Mongols), the Timurids, the Mamluks of Egypt, the Safavids of Persia, the Ottoman Turks, and the Mughals of India. The course will conclude with a discussion of "Orientalism" and more recent developments in Islamic art and architecture. The course is designed to meet two principal goals. The first is to develop skills of visual analysis and a critical vocabulary for discussing the media, technologies, styles, and composition of Islamic art. The second is to foster an understanding of art-and visual culture in general—according to social, economic, political, and religious contexts. Key topics include: patronage, issues of reception and aesthetics, the important link between art and text in the Islamic tradition, the organization and use of sacred space, gender issues, relationships between the art of various regions and cultures, and the western interpretation of Islam as part of the discourse on "Orientalism." Requirements include essay exams and at least one paper. As a general education course, this class provides an introduction to Islamic art and architecture for students of any major. It has no prerequisites, and presumes no prior exposure to art history. Students majoring in Art History will learn vocabulary, methodology, and theory that is not only basic to the field, but which will also broaden their knowledge of the discipline as a whole.

Old Listing Effective Through Fall 2019:

ASIA 100: What is Asia? (3 Credits) (IL) (BA) (GH)
An introduction to the history, literatures, politics, and cultures of Asia.

Changes Effective Spring 2020:

• Description
• Number to 125

ASIA 401: Technology & Society in Modern Asia (3 Credits) (IL) (BA)

Old Listing Effective Through Fall 2019:

Role of technology in modernization, national identity, and foreign relations of one or more Asian countries from 19th century to present day. ASIA 401 Technology & Society in Modern Asia (3) (IL)(BA) This course meets the Bachelor of Arts degree requirements. The countries of Asia are often seen (or imagined) in the West today in terms of their technological capabilities. This course will examine the role of technology in the modernization, national identities, and foreign relations of one or more countries of East, South, or Southeast Asia from the mid-19th century to the present day. Specific content will vary according to individual instructor, but topics may include the relationship between technological development and international relations, national power, leisure, domestic political and aesthetic movements, war, empire, and trade, as well as the impact of technology on interconnected images of self and other on the part of the peoples of Western and Asian countries. The objectives of the course are not only to learn about the role of technology in modern East Asia, but also to encourage us to rethink the way we view other countries and the factors that go into those perceptions (as well as developing a new way of understanding of what contributes to the views other peoples hold of their own countries).

Students will also consider the changing role that technology has played (and continues to play) in all modern societies.

Prerequisites: ASIA 100; ASIA 101; ASIA 102; ASIA 103; ASIA 104; ASIA 172; ASIA 174; ASIA 175; ASIA 183; ASIA 184; ASIA 186; ASIA 187

Changes Effective Spring 2020:

• Add Cross-Listing HIST 401
• Prerequisite/Corequisite/Concurrent Courses

ASIA 405Y: Seminar in Asian Studies (3-6 Credits) (WF) (IL) (BA)

Old Listing Effective Through Fall 2019:

An advanced, writing-focused seminar in Asian Studies.

Prerequisite: ASIA 100

Changes Effective Spring 2020:

• Credits to 3; repeatable to 6
• Description
• Prerequisite/Corequisite/Concurrent Courses

BESC 370: Community Psychology (3 Credits)

Old Listing Effective Through Fall 2019:

Introduction to concepts and terminology of community psychology with discussion of historical development. Community mental health issues will be analyzed.

Changes Effective Spring 2020:

• Abbreviation to PSYCH
• Number to 220
• Description
• Prerequisite/Corequisite/Concurrent Courses

BIOL 162: Human Anatomy and Physiology I – Laboratory (1 Credit) (GN)

Old Listing Effective Through Fall 2019:

This is the first laboratory course of a two-semester sequence introducing human anatomy and physiology. The A&P I laboratory complements the A&P I lecture by providing students with hands-on experiences such as examination of preserved specimens and anatomical models, and performing physiological experiments. Topics covered in the Human Anatomy & Physiology I Laboratory include: anatomic orientation and terminology; the anatomy and physiology of the nervous system; special senses; skeletal system and muscular system.

Concurrent Courses: Enforced Concurrent Course at Enrollment: BIOL 161

Changes Effective Spring 2020:

• Prerequisite/Corequisite/Concurrent Courses

BIOL 164: Human Anatomy and Physiology II – Laboratory (1 Credit) (GN)

Old Listing Effective Through Fall 2019:

This is the second laboratory course of a two-semester sequence introducing human anatomy and physiology. The A&P II laboratory complements the A&P II lecture by providing students with hands-on experiences such as examination of preserved specimens and anatomical models, and performing physiological experiments. Topics
covered in the Human Anatomy & Physiology II Laboratory include: the anatomy and physiology of the cardiovascular system, respiratory system, digestive system, urinary system, and reproductive system.

Concurrent Courses: Enforced Concurrent Course at Enrollment: BIOL 163

Changes Effective Spring 2020:

- Prerequisite/Corequisite/Concurrent Courses

**BISC 3: Environmental Science (3 Credits) (BA) (GN)**

Old Listing Effective Through Fall 2019:

Kinds of environments; past and present uses and abuses of natural resources; disposal of human wastes; prospects for the future. Students who have passed BIOL 220 or any other upper-level ecology course in biology may not schedule this course. BISC 3 Environmental Science (3) (GN)(BA) This course meets the Bachelor of Arts degree requirements. BISC 3 will help the student to prepare for living in current and future society's mixture of technology and mythology by presenting ideas and concepts about living systems and their environments. Policy makers and citizens are urgently needed who can act with an understanding of ecological principles when exercising community responsibilities to handle the environmental problems of our times, such as water use, solid waste management, global warming, energy use, conservation of irreplaceable natural resources, overpopulation, and the preservation of biodiversity. An understanding of biological and ecological principles and their application towards environmental challenges should give the student the confidence to be a trustworthy and active citizen, a conscientious steward of nature, and an agent of change for making a healthy, sustainable community and society. Regardless of the students’ field of study, as a citizen of both local and global communities some environmental issues will impact their lives. The course objectives are to enable students to: * Develop a basic understanding of how ecosystems and biological systems work, learn how economic systems depend on natural capital, biological/chemical processes, and the function of ecosystems * Develop a fundamental understanding of sustainability * Understand the scientific basis of specific environmental problems * Understand the significance of environmental legislation and the impact of increased citizen awareness on improving the quality of life we enjoy today * Further develop the ability to evaluate their contributions to shared environmental problems, identify ways to minimize their impact on the environment, and contribute to the development and maintenance of a sustainable future.

Changes Effective Spring 2020:

- Description

**BMB 1: Understanding the Bases of Human Disease (3 Credits) (BA) (GN)**

Old Listing Effective Through Fall 2019:

A broad survey of the molecular and cellular factors that contribute to an understanding of selected human diseases. B M B 001 Understanding the Bases of Human Disease (3) (GN)(BA) This course meets the Bachelor of Arts degree requirements. B M B 001, Understanding the Bases of Human Disease, is a survey of the most common diseases of humans. In addition to discussing various diseases, symptoms, outcomes, prevention and treatment options, we also study disease processes by describing events at the cellular or DNA level. We will come to appreciate that various cellular, metabolic or genetic problems can give rise to disorders that carry a common name - anemia, for example. One form, Sickle Cell anemia, also provides a good example of another theme of the course: how a small genetically-based problem in one function of one cell type can lead to a cascade of malfunctions with ramifications system wide. How medicines work and how they are metabolized by the body will be discussed. Treatment of the growing problem of drug/drug, drug/food, and drug/supplement interactions will also be included. Any study of infectious disease must be prefaced by a discussion of the proper functioning of the immune system and how its various components work together to fight an infection. The proper function or malfunction of the immune system is also studied for relationships to noninfectious diseases such as cancer and certain genetic disorders. As with any system of the body, the immune system also has its own unique set of disorders: allergy, hypersensitivity, autoimmunity and immune deficiency - congenital and acquired. In our exploration of infectious diseases, we will look at various mechanisms of infection used by different types of organisms and at strategies the offending organisms might have to fool the immune system, hide from the immune system, or fight against it. A prime example is the ability of HIV to hide from the immune system. Knowing disease mechanisms and the life cycle of the infectious agent can suggest strategies for treatment of the disease. Another focus of this unit will include discussion of emerging and re-emerging diseases. Human genetic traits and susceptibilities are discussed throughout the course, but we will also address the major genetic disorders, patterns of inheritance, chromosomal disorders and new treatments available for a growing number of such disorders. Included under this topic is the problem of cancer in all of its various forms today. The course addresses issues of normal cell/cancer cell characteristics and the concept of cancer as a "genetic disease". Using the information gleaned from units on cell function, genetics and the immune system, we will explore new treatment options evolving today. No course on treatment of disease is complete without the study of the two major "lifestyle" diseases: coronary vascular disease and diabetes. We will explore the environmental factors as well as the genetic and infection-related factors often associated with these diseases. The course is independent of all other B M B courses and does not serve as a prerequisite for any other course.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

**BRASS 100: Trumpet: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in trumpet one-half hour per week. BRASS 100, BRASS 100J Trumpet: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the trumpet well in a variety of musical settings. The instrument is active in orchestral, band, jazz, chamber, and solo settings. Therefore, the basic goal for serious trumpet students as well as amateur trumpet students is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student’s ability to participate and contribute in the various ensembles on campus. The teacher and the student evaluate the student’s progress and performance. Suggestions for improvement are agreed upon and developed. The course is offered to both music majors and non-majors. Students receive a one-half hour lesson per week, presuming at least
Changes Effective Spring 2020:

BRASS 101: French Horn: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in French horn one-half hour per week. For students who qualify. BRASS 101 JBRASS 101 J French Horn: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the French horn well in a variety of musical settings. The instrument is active in orchestral, band, chamber, and solo settings. Therefore, the basic goal for serious horn students as well as amateur horn students is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student's ability to participate and contribute in the various ensembles on campus. The teacher and the student evaluate the student's progress and performance. Suggestions for improvement are agreed upon and developed. The course is offered to both music majors and non-majors. Students receive a one-half hour lesson per week, presuming at least 5 hours of practice. Enrollment can range from 5-8 per semester depending on the availability of staffing.

Changes Effective Spring 2020:

BRASS 102: Trombone: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in trombone one-half hour per week. BRASS 102 JBRASS 102 J Trombone: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the trombone well in a variety of musical settings. The instrument is active in orchestral, band, jazz, chamber, and solo settings. Therefore, the basic goal for serious trombonists as well as amateur trombonists is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student’s ability to participate and contribute in the various ensembles on campus. The teacher and the student evaluate the student’s progress and performance. Suggestions for improvement are agreed upon and developed. The course is offered to both music majors and non-majors. Students receive a one-half hour lesson per week, presuming at least 5 hours of practice. Enrollment can range from 10-15 per semester depending on the availability of staffing.

Changes Effective Spring 2020:

BRASS 103: Euphonium: Secondary (1 Credit: Maximum of 8 Credits) (BA)
Old Listing Effective Through Fall 2019:

Individual instruction in euphonium/baritone one-half hour per week. BRASS 103 JBRASS 103 J Euphonium: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the euphonium well in a variety of musical settings. The instrument is active in orchestral, band, chamber, and solo settings. Therefore, the basic goal for serious euphonium students as well as amateur euphonium students is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student's ability to participate and contribute in the various ensembles on campus. The teacher and the student evaluate the student's progress and performance. Suggestions for improvement are agreed upon and developed. The course is offered to both music majors and non-majors. Students receive a one-half hour lesson per week, presuming at least 5 hours of practice. Enrollment can range from 12-15 per semester depending on the availability of staffing.

Changes Effective Spring 2020:

BRASS 104: Tuba: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in tuba one-half hour per week. BRASS 104 JBRASS 104 J Tuba: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the tuba well in a variety of musical settings. The instrument is active in orchestral, band, chamber, and solo settings. Therefore, the basic goal for serious tuba students as well as amateur tuba students is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student’s ability to participate and contribute in the various ensembles on campus. The teacher and the student evaluate the student’s progress and performance. Suggestions for improvement are agreed upon and developed. The course is offered to both music majors and non-majors. Students receive a one-half hour lesson per week, presuming at least 5 hours of practice per week. Enrollment can range from 8-10 per semester depending on the availability of staffing.

Changes Effective Spring 2020:

BRASS 110: Trumpet: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in trumpet one hour per week. BRASS 110 JBRASS 110 J Trumpet: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the trumpet well in a variety of musical settings. The instrument is active in orchestral, band, jazz, chamber, and solo settings. Therefore, the basic goal for serious trumpet students as well as amateur trumpet students is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student’s ability to participate
Changes Effective Spring 2020:

**BRASS 111: French Horn: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in French horn one hour per week. For students who qualify. BRASS 111JBRASS 111J French Horn: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the horn well in a variety of musical settings. The instrument is active in orchestral, band, chamber, and solo settings. Therefore, the basic goal for serious horn students as well as amateur horn students is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student's ability to participate and contribute in the various ensembles on campus. The teacher and the student evaluate the student's progress and performance. Suggestions for improvement are agreed upon and developed. The course is offered to both music majors and non-majors. Students receive a one-hour lesson per week, presuming at least 10 hours of practice. Enrollment can range from 8-10 per semester depending on the availability of staffing.

Changes Effective Spring 2020:

- Description

**BRASS 112: Trombone: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in trombone one hour per week. BRASS 112JBRASS 112J Trombone: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the trombone well in a variety of musical settings. The instrument is active in orchestral, band, jazz, chamber, and solo settings. Therefore, the basic goal for serious trombonists as well as amateur trombonists is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student's ability to participate and contribute in the various ensembles on campus. The teacher and the student evaluate the student's progress and performance. Suggestions for improvement are agreed upon and developed. The course is offered to both music majors and non-majors. Students receive a one-hour lesson per week, presuming at least 10 hours of practice. Enrollment can range from 8-10 per semester depending on the availability of staffing.

Changes Effective Spring 2020:

- Description

**BRASS 114: Tuba: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in tuba one hour per week. BRASS 114JBRASS 114J Tuba: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. The goals of this course are to introduce, define, and develop the musical and technical skills required to play the tuba well in a variety of musical settings. The instrument is active in orchestral, band, chamber, and solo settings. Therefore, the basic goal for serious tuba students as well as amateur tuba students is to be proficient and versatile. The repertoire studied includes a variety of musical genre including the use of technical etudes, lyrical studies and standard solo works in a variety of styles. This course directly affects the student's ability to participate and contribute in the various ensembles on campus. The teacher and the student evaluate the student's progress and performance. Suggestions for improvement are agreed upon and developed. The course is offered to both music majors and non-majors. Students receive a one-hour lesson per week, presuming at least 10 hours of practice. Enrollment can range from 8-10 per semester depending on the availability of staffing.

Changes Effective Spring 2020:

- Description

**CAM 4: Jewish and Christian Foundations (3 Credits) (US) (IL) (BA) (GH)**

Old Listing Effective Through Fall 2019:

Introduction to the perspectives, patterns of worship, morality, historical roots, and institutions of the Judaeo-Christian traditions; their relationships to culture. CAMS 4 / JST 4 / RLST 4 Jewish and Christian Foundations (3) (GH;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. Jewish and Christian Foundations seeks to help students better understand the Bible as the scriptural background for both Judaism and Christianity. Some people believe the Bible is “scripture,” self communicated by God to humanity. To others, this text is a compendious collection of poetry, historical writing, law, myth, and mystical writings, which stems from the religious, political, and cultural milieu of the ancient Near East. Some people believe this is a book designed to bring people to belief in the power and reality of the god discussed in these writings. For others, the book is a source of both unity and division among people in the world, and must be treated as ambiguous in nature. Still others see the biblical text as the single most important collection of literature to have shaped the religious, political, and imaginative contours of western civilization. This course focuses on selected portions of the biblical text, representing diverse strands of historical remembrances, interpreted and re-interpreted in light of critical historical events, and serving, first as an oral, and later as a written account of the life, beliefs, and hopes of Jewish and Christian peoples. Readings from both the Hebrew Bible (the Christian "Old Testament") and the Christian scriptures (the “New Testament”) will be used. CAMS 4 / JST 4 / RLST 4 provides a broad discussion of the origin of both Judaism and Christianity within a historical and geographical framework. The principle teachers, writers, and “founders” are discussed, including Moses, Isaiah, David, Ezra, Jesus, Peter, and Paul. Students are challenged to read and understand these important writings which have interpreted the human condition and which have oriented generations of people towards a transcendent referent associated with love and loyalty. Evaluation methods may include two hour examinations, a final examination, and two short writing assignments. The examinations are not cumulative. Class participation will also be a factor in overall...
evaluation for the final grade. CAMS 4 / JST 4 / RLST 4 may be used to fulfill requirements for the Religious Studies, Classics and Ancient Mediterranean Studies and Jewish Studies major/minor. Finally, students will be challenged to evaluate and respond to the literature as it touches on human experience experiences which all people share regardless of their personal religious affiliation.

Cross-Listed Courses: JST 4, RLST 4

Changes Effective Spring 2020:

• Description

CAMS 123: Ancient Monotheisms: Judaism, Christianity, Islam (3 Credits) (IL) (BA) (GH)

Old Listing Effective Through Fall 2019:

Examines the origins and early development of the three major monotheisms of ancient Near East: Judaism, Christianity, and Islam. CAMS (J ST/RL ST) 123 Ancient Monotheisms: Judaism, Christianity, Islam (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. This course examines the origins and early development of the three major monotheistic religions: Judaism, Christianity, and Islam. These three related religious traditions originate in the Near East and all center around a belief in the existence of one single god (monotheism). The aim of the course is to describe and compare core events, major beliefs, practices, and significant historical trends in each monotheistic tradition from their respective beginnings to around 750 C.E. The course begins with the origins of Judaism, the first religion in the Near East to be monotheistic. It then examines how Christianity branched out of Judaism in ancient Palestine, as well as how Islam emerged in Arabia in the 7th century C.E. within a historical context rich in Jewish and Christian influences. All three religions share basic beliefs about the nature of deity, the role of the written word in revelation, and prophets as messengers. Equal emphasis will be placed on these commonalities and on the major tenets and practices that differentiate these three religions.

Cross-Listed Courses: JST 123 RLST 123

Changes Effective Spring 2020:

• Description

CAMS 124: Early and Medieval Christianity (3 Credits) (US) (IL) (BA) (GH)

Old Listing Effective Through Fall 2019:

Analysis in cultural context of selected thinkers, ideas, and movements in Christianity from the second through the fifteenth century. CAMS (J ST/RL ST) 124 Early and Medieval Christianity (3) (GH;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. This course traces the development of one of the world's "Big 5" religions from the death of its founder (about the year 30 CE) down to the middle ages. It focuses on significant trends, controversies, personalities, and turning points. These are not just diverse in terms of chronological breadth, but are also spread geographically from the eastern end of the Roman Empire (the border with Persia) to northern Europe. Attention is given to the various manifestations of Christianity (Judaic, Hellenistic, Latin), and the linkage between local patterns (culture, history and predispositions) and how these shaped the sort of Christianity that took root in particular areas. Students typically will be evaluated on four "pop" quizzes, a midterm and a final exam. The course can be used towards a major or minor in Religious Studies, Classical and Ancient Mediterranean Studies, and Jewish Studies and used to fulfill 3 credits in the Humanities for non-majors.

Cross-Listed Courses: JST 124 RLST 124

Changes Effective Spring 2020:

• Description

CAS 214: Speech Writing (3 Credits) (WF)

Old Listing Effective Through Fall 2019:

Writing speeches for delivery in political, professional, and ceremonial settings; emphasis on composition and language for oral presentation.

Prerequisite: CAS 100

Changes Effective Spring 2020:

• Description

• Add GH Designation

• Prerequisite/Corequisite/Concurrent Courses

CAS 250: Small Group Communication (3 Credits)

Old Listing Effective Through Fall 2019:

Skill development in the areas of group discussion, leadership, and teamwork. CAS 250 Small Group Communication (3) This course serves to develop students' skills in decision-making, problem-solving, and leadership. To provide opportunities for students to develop competence as communicators and leaders, this course will address both theory and practices. Learning from case studies and analyzing real-world problems are at the center of exploring group communication in this course. CAS 250 fulfills the skills requirements for our majors and minors and is the skills course associated with an organizational communication pathway emphasis in the major. Additionally, involvement in groups is essential to learn about group processes; therefore students will participate in a variety of group-based assignments and presentations. Evaluations will be determined at the individual level (e.g., exams, papers, attendance, peer evaluation) and at the group level (e.g., group presentation, group process, group paper). There will be two exams, a problem analysis report, and at least two small papers required in addition to the final group project and presentation.

Changes Effective Spring 2020:

• Description

CAS 253: Health Communication (3 Credits)

Old Listing Effective Through Fall 2019:

Interviewing, briefing, conferring, and decision making; analyzing and evaluating formal and informal patterns of communication in organizations.

Changes Effective Spring 2020:

• Description

• Add GS Designation
To introduce students to principles of health message design and the general theories and models used to guide these efforts. CAS 253 Health Communication (3) This course is designed to provide students with theoretical principles for practice in planning and evaluating health messages for dissemination by health organizations, policy makers, and other interested publics. CAS 253 emphasizes the potential positive and negative outcomes associated with specific messages designed to impact individuals’ knowledge and behavior with health consequences. It emphasizes the importance of audience segmentation on goal selection in guiding health message design, as well as the effects and effectiveness of source and channel selection for reaching particular audiences. The CAS 253 Health Communication course is one of a series of electives for Communication Arts and Sciences majors or minors interested in pursuing careers in organizational communication, health communication, sales, and training and development in small groups. The course is possibly linked to those with interests in biobehavioral health.

**Changes Effective Spring 2020:**
- Description
- Add GS Designation

**CAS 321: Rhetoric and Law (3 Credits)**
Old Listing Effective Through Fall 2019:

A survey of the literature on the role of rhetoric in law, including trial advocacy, appellate argument, and judicial reasoning. CAS 321CAS 321 Rhetoric and Law (3) A survey of the literature on the role of rhetoric in law, including trial advocacy, appellate argument, and judicial reasoning. Rhetoric and Law explains how knowledge of rhetorical principles enhances the understanding of legal documents, reasoning, and performance. This course surveys classical to contemporary rhetorical literature demonstrating its utility to the study of law. Students will examine the role rhetoric plays in injury deliberation, trial advocacy, appellate argument and judicial reasoning. Students will demonstrate their understanding of rhetorical theory by participating in a mock trial. In this exercise, students will deliver opening statements, closing arguments as well as conduct direct and cross-examination of witnesses. Finally, the class will examine United States Supreme Court majority and dissenting opinions as rhetorical documents.

**Changes Effective Spring 2020:**
- Description
- Add GH Designation

**CAS 373: The Rhetorics of War and Peace (3 Credits)**
Old Listing Effective Through Fall 2019:

This course explores how war and peace are advocated. CAS 373 The Rhetorics of War and Peace (3)In The Wealth of Nations (1776), the first classic of capitalism, Adam Smith speaks of “the art of war,” deploying a phrase from Sun-Tzu’s The Art of War that would later appear in Baron von Clausewitz’s On War and also in contemporary U.S. military handbooks. This course argues that war is indeed an art, and a thoroughly rhetorical one in which the political economy of persuasion is as important as high-tech weaponry and whiz-bang battle plans. By considering some of war’s most thoughtful theorists, by discussing wars past and present, and by reading powerful defenses and trenchant critiques of war, this course will help students understand how wars are managed rhetorically. This course satisfies a grave need: for living in the post-9/11 world requires the critical rhetorical skills necessary to understand not just how war is waged or how it structures our lives but how war is advocated and defended. The trajectory of this course will thus make the full arc from war to peace. Perhaps most importantly in this time of grave post-modern warfare, this semester’s readings and discussions will make us all better rhetorical scholars capable of imagining alternative futures. From the realities of war comes the possibility of peace.

**Changes Effective Spring 2020:**
- Add GH Designation

**CAS 403: Interpersonal Communication Theory and Research (3 Credits)**
Old Listing Effective Through Fall 2019:

Examining behavior within interpersonal encounters, with emphasis on both theoretical/applied explanations for how and why people act during such interactions.

Prerequisites: CAS 203

**Changes Effective Spring 2020:**
- Description
- Abbreviated Title
- Add GS Designation

**CAS 452: Organizational Communication Theory and Research (3 Credits)**
Old Listing Effective Through Fall 2019:

Explores the nature and functions of communication in organizations; emphasis on concepts, tools, and skills for effective management of communication.

Prerequisite: CAS 202 or CAS 252

**Changes Effective Spring 2020:**
- Description
- Add GS Designation
- Prerequisite/Corequisite/Concurrent Courses

**CAS 452W: Organizational Communication Theory and Research (3 Credits) (WF)**
Old Listing Effective Through Fall 2019:

Explores the nature and functions of communication in organizations; emphasis on writing and exploring concepts, tools, and skills for effective management of communication. CAS 452W CAS 452W Organization Communication Theory and Research (3)This course is designed to further introduce you to the field of Organizational Communication. Emphasis is placed on macro-organizational variables that can systematically affect micro-communication behaviors: in other words, how could something like the hierarchy of the organization influence who you talk with as an organizational employee. The purpose of the course is to provide you with a basic understanding of communication-relevant behaviors and activities in organizations. This includes things like leadership, teamwork, conflict management, and diversity. Additionally, we will examine various theories of and approaches to studying communication within organizations. My hope is that when you’ve successfully completed the course you’ve mastered these objectives: - Develop a vocabulary and understanding of organizational communication concepts. - Become familiar with the historical, current, and future issues and problems facing organizations. - Apply theoretical perspectives and concepts to organizational situations and settings. -
Identify and understand the relationships between macro (e.g. structure and hierarchy) and micro (e.g. social support and stress) organizational communication variables. Experience locating, reading, synthesizing, and evaluating scholarly research appropriate for organizational communication phenomena.

Prerequisite: CAS 202 or CAS 252

Changes Effective Spring 2020:
- Description
- Add GS Designation
- Prerequisite/Corequisite/Concurrent Courses

CAS 478: Contemporary American Political Rhetoric (3 Credits)
Old Listing Effective Through Fall 2019:

Analysis of selected speeches, debates, and persuasive campaigns and movements in recent American political history.

Prerequisites: CAS 100

Changes Effective Spring 2020:
- Description
- Title
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses
- Add GH Designation
- Add US Designation

CED 152: Community Development Concepts and Practice (3 Credits)
Old Listing Effective Through Fall 2019:

Concepts and practice of community development. CED 152 Community Development Concepts and Practice (3) Community development is broadly recognized as a process by which places (communities, small towns, neighborhoods) and the people in them, improve their economic and/or social well-being. Health of the environment and sustainable use of natural resources ensure the long-term well-being of human populations and so are central to sustainable community development. The practice of community development requires the ability to identify and understand the interrelationships of economy, society and environment locally, nationally and globally. Community development hinges on the capacity of local communities and residents to influence and determine their own futures. Students will gain an introduction to the concepts and models of community development and will become familiar with the roles of community development practitioners in developed and developing country settings. They will be able to identify the consequences of development strategies for social, economic and environmental well-being, focusing on the interrelationships of these aspects of development. Students will be introduced to strategies to identify capacity and resources available in communities and those that need to be enhanced. Models of decision-making will be introduced and students will work in teams in class with a focus on successful team functioning, identifying commonalities and shared interests to foster decision-making, and being able to extend that experience to working with groups in a community. Students will gain knowledge and understanding of the relevant concepts, processes and practice through readings and in-class lecture and discussion. Case studies of specific community development issues will give students the opportunity to apply the concepts and skills they learn in class, and to work in teams where students take on perspectives of different stakeholders and attempt to reach a resolution. Examples will be used throughout the course to portray important concepts. This knowledge and associated skills can be used to form the basis for further training and a career in community development or to provide a basic understanding for those interested in volunteering in their own community.

Changes Effective Spring 2020:
- Description
- Abbreviated Title
- Add GS Designation

CED 155: Science, Technology and Public Policy (3 Credits) (BA) (GS)
Old Listing Effective Through Fall 2019:

This course will survey the main issues that relate science and technology to public policy.

Changes Effective Spring 2020:
- Description
- Abbreviated Title

CED 309: Land Use Dynamics (3 Credits)
Old Listing Effective Through Fall 2019:

Theory of land use and land use decision-making. CED 309 Land Use Dynamics (3) Land is a key natural resource for society. Decisions related to land use are understood through alternative theories that serve to explain why prevailing land use patterns occur and change. This course examines the theoretical foundations of land use and policy practices to better understand how land use may change in the future in response to changes in land prices, population growth, human preferences and especially preferences for natural amenities, and the quality of the natural environment, among other factors. Given current issues including the twin problems of urban sprawl and land abandonment, the course will also examine the role of land use policy and specific programs to guide and provide greater public control over land use decisions. Students will gain an appreciation of the importance of land as a resource, and the potential for irreversibility in many land use decisions. Knowledge will be gained of the relevant theories, trends and policies through readings and in-class lecture and discussion.

Prerequisite: ECON 102 or equivalent; GEOG 160

Changes Effective Spring 2020:
- Description
- Title
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses

CED 400: Exploring Indigenous Ways of Knowing in Great Lakes Region: Lecture (2.5 Credits) (US)
Old Listing Effective Through Fall 2019:

Explore concepts and values distinctive to indigenous ways of knowing in the Great Lakes Region through readings, reflections, and library research. CED 400 Exploring Indigenous Ways of Knowing in the Great Lakes Region: Lecture (2.5) (US) Exploring Indigenous Ways of Knowing in the Great Lakes Region (400A) explores concepts and values distinctive to indigenous ways of knowing (IK) in the Great Lakes Region. The course offers a hands-on, experiential approach to understanding Indigenous ways of knowing in both general and specific contexts. Students will engage in the development and application of culturally responsive, Indigenous-based methods to critically analyze the interrelated components of Indigenous knowledge, cultural, social, and environmental systems. This course is designed to provide students with an understanding of Indigenous ways of knowing as culturally specific, knowledge systems that are distinct from Western scientific and/or academic knowledge. The course is open to students from diverse academic backgrounds and does not require prior knowledge of Indigenous ways of knowing or Indigenous studies. The course is offered online and consists of a series of interactive activities, including readings, discussions, and assignments. The course is designed to promote critical thinking, cultural sensitivity, and intellectual humility. Students will be encouraged to reflect on the relationship between Indigenous ways of knowing, cultural knowledge, and the natural environment. The course is suitable for students interested in learning about Indigenous ways of knowing, cultural knowledge, and the relationship between Indigenous ways of knowing and the natural environment.
Region through readings, video segments, and lectures. Five structural concepts or key themes—local knowledge, relational knowledge, empirical knowledge, spiritual knowledge, and traditional knowledge—provide a conceptual framework for understanding indigenous cultures and knowledge production and their unique contributions to western society in the 21st century. Students will be introduced to the Algonquian cultures of the Great Lakes Region and to the Ojibwe (Anishinaabeg), Odawa, and Potawatomi (Three Fires) cultures in particular. This course will introduce students to the distinctive ways indigenous people experience, understand, and know the world through their relationship with the land or region to which they belong. Too often, colonizers around the world have ignored indigenous knowledge systems even though these ways of knowing have sustained peoples, cultures, and environments for thousands of generations. Because these ways of knowing are generally preserved and transmitted through stories, music, ceremony, and embodied traditions, they are seldom understood and frequently dismissed by those who control the production of knowledge in the modern world. The knowledge of the indigenous peoples of the Great Lakes region will, in this course, be presented as an empirically grounded scientific body of knowledge and theory comparable and complementary to the European tradition and, in specific ways, enhancing the sustainability of western scientific knowledge and practice. This course is a prerequisite for the Maymester field experience—Exploring Indigenous Ways of Knowing among the Ojibwe (400B)—which offers students an opportunity to experience indigenous ways of knowing by engaging with Ojibwe educators, traditional knowledge holders, elders, and families among the Anishinaabeg of Red Lake, Leech Lake, and White Earth Nations, the three largest Ojibwe reservations in the US.

Prerequisite: R SOC011, SOC 001 or equivalent

Changes Effective Spring 2020:

- Description
- Credits
- Number to 400N
- Add GS Designation
- Add GH Designation
- Add Inter-Domain Designation
- Abbreviated Title
- Add Cross-Listing RSOC 400N
- Prerequisite/Corequisite/Concurrent Courses

CED 404: Community, Environment and Development Research Methods (3 Credits)
Old Listing Effective Through Fall 2019:

Students will learn empirical research methodology in the areas of community, environment and development. CED 404 Survey Research Methods (3) CED 404 teaches students practical approaches to empirical research in the areas of community, environment, and development (CED). The course covers research tools commonly used by CED professionals at the local level, including secondary data analysis, surveys, focus groups, and participatory research. As importantly, students learn and practice the basic mindset required for developing and exploring research questions. Students discuss and practice appropriate methods for presenting research results, including writing for different genres.

Prerequisite: STAT 200

Changes Effective Spring 2020:

- Description
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses
- Credits

CED 420: Women in Developing Countries (3 Credits) (US) (IL)
Old Listing Effective Through Fall 2019:

Analysis of women's work, experiences, and development policies and practices in Africa, Asia, and Latin America. CED (WMNST) 420 Women in Developing Countries (3) (US,IL) The purpose of this course is to increase understanding of women's lives in third world countries at the time when women's movements, grassroots activism, and feminism are on the rise in the third world. The course examines third world women's challenges to Western definitions of feminism and traces the theoretical shifts and practical changes related to women's issues in African, Asia, and Latin America. Students participate in studying specific community and agricultural development projects. Topics include feminist critiques of development and post-colonialism, ecofeminism and environment, sexuality and reproduction, global restructuring, and grassroots community activism. This course will add diversity to both the rural sociology, community and economic development, and women's studies curricula. International, gender, ethnic, and racial issues are core components of the course. The course will be an elective for Women's Studies majors and minors and will serve graduate students in rural sociology, women's studies, and other fields.

Prerequisite: 5th semester standing or above

Cross-Listed WMNST 420

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title
- Number to 420W
- Add WAC Designation
- Remove US designation
- Prerequisite/Corequisite/Concurrent Courses

CED 427: Society and Natural Resource (3 Credits) (WF)
Old Listing Effective Through Fall 2019:

Analysis of the relationships between societal development and enhancement and natural resources. CED 427W Society and Natural Resource (3) There is a common tendency to portray environmental and natural resource problems as biophysical in nature. The implication of this tendency is that such problems are best addressed by scientists and engineers who discover evidence of and devise new technologies to fix them. Another common tendency is to assume that people resist solutions to environmental and natural resource problems because of individually held anti-environmental attitudes. In contrast to these two perspectives, sociologists point out that environmental and natural resource problems often lie at the intersection of biophysical processes and social, political, economic, belief, value, and knowledge systems. The goals of this writing-intensive course are to introduce students to the complexity of environmental and natural resource problems and to teach them to think sociologically. After taking this course, students should be better prepared to engage in debates with
academics, politicians, and other citizens regarding the causes and potential solutions to environmental and natural resource problems.

Prerequisite: R SOC001 or SOC 001 and ENGL 202

Changes Effective Spring 2020:

• Number to 327
• Remove WAC Designation
• Description
• Title
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

CED 430: Principles of Community Economic Development (3 Credits)
Old Listing Effective Through Fall 2019:

Concepts, strategies and techniques of local economic analysis, planning and development; case studies and decision-making exercises. CED 430 Principles of Community Economic Development (3) This course is designed to introduce the issues giving rise to concern for rural and regional economies, and the theories, concepts and tools of rural and regional economic development. The goal is to integrate theory and practice and apply them to economic development problems. Tools are presented in a “how to” manner. Topics include current issues in rural economies, the economic view of rural development; business retention, expansion and location; entrepreneurship and its role in the economy; understanding the local economic structure and the forces of chance; introduction to economic growth theories; export base theory and economic base analysis; the role of labor and capital in development; techniques of market area, central place, shift-share and input-output analysis; policies of local economic development and growth.

Prerequisite: introductory course in economics

Changes Effective Spring 2020:

• Number to 430W
• Add WAC Designation
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

CED 431: Economic Analysis of Environmental and Resource Policies (3 Credits)
Old Listing Effective Through Fall 2019:

Economic analysis of environmental and natural resource policies, benefit-cost analysis, non-market valuation techniques; resource damage assessment.

Changes Effective Spring 2020:

• Number to 431W
• Description
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses
• Add WAC Designation

CED 452: Rural Organization (3 Credits)
Old Listing Effective Through Fall 2019:

Social organization and change in rural communities; use of sociological principles in analysis of rural problems and rural development. CED 452 Rural Organization (3) This course combines an introduction to the social theories of communities with real-life examples of applications to understanding community problems and concerns. The focus is on the special circumstances facing small towns and rural communities, but the concepts are applicable in all communities, from urban neighborhoods to suburbs. Topics covered include local community in a global economy, power and decision-making, the role of governments and other social institutions, development of community and the importance of building social infrastructure as well as economic and physical infrastructure, multi community collaboration and building, and sustainable communities. Those taking the class will gain experience in conducting a case study of a small Pennsylvania community, build skills in working in a team, and gain understanding of the complexity of factors that influence community (and your own) well-being. If your future career involves operating within a community setting, this course can increase your knowledge of that setting and how to function within it. And, even if you don’t plan on working with communities in your job, you will be living in a community. This course can help you to understand the ways that you can contribute to improving your own quality of life by becoming involved in your community.

Prerequisite: 6 credits in rural sociology, sociology, or psychology

Changes Effective Spring 2020:

• Description
• Title
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

CHEM 1: Molecular Science (3 Credits) (BA) (GN)
Old Listing Effective Through Fall 2019:

Selected concepts and topics designed to give non-science majors an appreciation for how chemistry impacts everyday life. Students who have received credit for CHEM 003, 101, or 110 may not schedule this course. CHEM 001 CHEM 001 Molecular Science (3) (GN) (BA) This course meets the Bachelor of Arts degree requirements. CHEM 001 is designed for students who want to gain a better appreciation of chemistry and how it applies to everyone’s everyday life. You are expected to have an interest in understanding the nature of science, but not necessarily to have any formal training in the sciences. During the course, you will explore important societal issues that can be better understood knowing some concepts in chemistry. The course is largely descriptive, though occasionally a few simple calculations will be done to illuminate specific information. The course does rely on your ability to think systematically, and to relate things to each other. From year to year and instructor to instructor, the course may cover any number of a large variety of topics related to current events, including, but not limited to: air and water pollution, ozone depletion, global warming, acid rain, new and old methods of energy generation and energy use in modern society, examples of production and use of modern polymers, examples of production and use of modern drugs, examples of the chemistry of nutrition, examples of advances in biochemistry and how they affect us.

Changes Effective Spring 2020:

• Description
CHNS 120: Introduction to Chinese Literature and Culture (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Chinese cultural productions, classical through contemporary, literature and film; changing cultural settings in multiple Chinese-speaking locations. Taught in English. CHNS 120 Introduction to Chinese Literature and Culture (3) (GH;IL) (BA) This course meets the Bachelor of Arts degree requirements. This course provides an introduction to Chinese cultural production from ancient times to the postmodern era, with an emphasis on literature. In its more recent segments, the course will include film as well as considerations of Chinese cultures in the Chinese diaspora (such as the United States) and throughout the Chinese-speaking world. Students will learn about major eras of Chinese literature and the diversity of Chinese cultures in such locations as mainland China, Taiwan, Hong Kong, and the worldwide Chinese diaspora. Readings will represent several genres, such as poetry, folk tale, short story, novel, prose fiction, drama, and historical annals. Through this course students can develop a historical and cultural perspective in order to understand the contexts and value systems that have inspired literary works. Students will investigate such topics as the relation between social institutions and the individual, the traditional patriarchal system, the changing roles of women, westernization, and post modern consumer culture, among others. Students will read literature and related materials from different periods, with examples from other media such as films where appropriate. Class work will include lectures or presentations by the instructor and student participation through means such as guided discussions, group discussions, and students’ presentations. This participatory approach is intended to deepen students’ appreciation of the texts, to help them understand value systems that may differ from, or else be shared with, those predominant in modern Western cultures, and to assist students in developing analytical and expressive abilities. CHNS 120 is designed to be suitable for all students generally interested in China and the Chinese-speaking world, or interested in literature and other fields of humanistic study, whether or not they have previously studied Chinese culture. All materials will be available in English. The course is designed to count as General Education, as international cultures, and as a B.A. “Other Cultures” course. This course will be taught in the active-learning mode, featuring a variety of instructional components such as lecture, discussion, oral presentations, web-based activities, etc., to provide students abundant opportunity for expressing their opinions. As a general education course, all versions will include writing, speaking, self-expression; information gathering, synthesis, and analysis; and international/intercultural components.

Changes Effective Spring 2020:

• Description

CHNS 120W: Introduction to Chinese Literature and Culture (3 Credits) (WF) (GH)
Old Listing Effective Through Fall 2019:

An introduction to Chinese histories and societies through literature and visual culture. Readings drawn from both classical and modern traditions, covering the period from the 11th century B.C. to the contemporary era.

Changes Effective Spring 2020:

• Description
• Add IL Designation
• Add BA Other Cultures and Humanities Designations

CI 495C: Clinical Application of Instruction – Secondary Education (3 Credits: Maximum of 3 Credits)
Old Listing Effective Through Fall 2019:

Practicum situation for demonstration of selected instructional strategies and management skills acquired in professional training. To be offered only for Satisfactory/Unsatisfactory grading.

Prerequisite: CI 295, EDPSY014, EDTHP115. Official clearances required. See: http://www.ed.psu.edu/preservice/clearance.htm; Concurrent: special methods course(s) in area of certification

Changes Effective Spring 2020:

• Description
• Make Not Repeatable
• Prerequisite/Corequisite/Concurrent Courses

CI 495E: Practicum in Student Teaching—Secondary Education (15 Credits: Maximum of 15 Credits)
Old Listing Effective Through Fall 2019:

Full-time classroom instruction in secondary education. Students supervised by university personnel and practicing teachers. No concurrent courses permitted.

Prerequisite: CI 495C, seventh-semester standing, and grade of C or higher in all specified and professional courses. Official clearances required. See: http://www.ed.psu.edu/preservice/clearance.htm

Changes Effective Spring 2020:

• Description
• Make Not Repeatable
• Prerequisite/Corequisite/Concurrent Courses

CI 295: Introductory Field Experience for Teacher Preparation (1-3 Credits: Maximum of 6 Credits)
Old Listing Effective Through Fall 2019:

Selected observation of schooling situations with small group and tutorial participation.

Prerequisites: 2nd Semester Standing Official Clearances Required. See: http://www.ed.psu.edu/preservice/clearance.htm

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses
CMPSC 101: Introduction to C++ Programming (3 Credits) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Properties of algorithms, languages, and notations for describing algorithms, applications of a procedure-oriented language to problem solving. A student may receive credit for only one of the following courses: CMPSC 101, 200, 201, 202, 121.

Changes Effective Spring 2020:

- Title
- Abbreviated Title
- Description

COMM 100: The Mass Media and Society (3 Credits) (BA) (GS)
Old Listing Effective Through Fall 2019:

AMST 106 / COMM 100 The Mass Media and Society (3) (GS) (BA) This course meets the Bachelor of Arts degree requirements. The Mass Media and Society is an overview of the interaction between mass media and society. By drawing from selected topics, the course pays particular attention to the social influences (e.g., economics, politics, technology, law and culture) that shape media messages. Among others, the course examines the nature of media controllers as well as the character of “users” and “consumers” of media products. By so doing, students are informed about the overall structure and scope of the mass media and led to understand the power and influences associated with media messages and practices. By the end of the semester, each student should have a better understanding of the dynamic nature of the mass media in an information society.

Cross-Listed Courses: AMST 106

Changes Effective Spring 2020:

- Description
- Add GH Designation
- Add Inter-Domain Designation
- Add US Designation
- Add BA Humanities Designation
- Number to 106N
- Cross-Listed Number to 106N

CRIM 480: Research Topics in Crime, Law, and Justice (1 Credit) (H)
Old Listing Effective Through Fall 2019:

Students are exposed to a variety of research topics related to crime, law, and justice. CRIM 480H Research Topics in Crime, Law, and Justice (1) This one-credit seminar is intended for Scholars in the spring semester of their third year who intend to complete their honors thesis in Crime, Law, and Justice. This course surveys the structures of information, patterns of information retrieval, and the resources and technologies used to research topics related to crime, law, and justice. Students complete a series of assignments involving information retrieval and the effective use of information technologies. This includes working with their faculty supervisor and collecting information on the topic they have selected for their honors thesis. At the conclusion of the class, students present a research proposal for their honors thesis, including a review of the relevant literature and a schedule for completing the thesis during their fourth year.

Prerequisites: CLJ 480H

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses
- Number to 480H

CRIM 481: Information Literacy in Crime, Law, and Justice (1 Credit) (H)
Old Listing Effective Through Fall 2019:

Students are exposed to a variety of information sources related to crime, law, and justice. CRIM 481H Information Literacy in Crime, Law, and Justice (1) This one-credit seminar is intended for Scholars in the spring semester of their third year who intend to complete their honors thesis in Crime, Law, and Justice. This course surveys the structures of information, patterns of information retrieval, and the resources and technologies used to research topics related to crime, law, and justice. Students complete a series of assignments involving information retrieval and the effective use of information technologies. This includes working with their faculty supervisor and collecting information on the topic they have selected for their honors thesis. At the conclusion of the class, students present a research proposal for their honors thesis, including a review of the relevant literature and a schedule for completing the thesis during their fourth year.

Prerequisites: CLJ 480H

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses
- Number to 481H

DANCE 240: Jazz Dance (1.5 Credits: Maximum of 6 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

An exploration of jazz dance technique throughout history. DANCE 240 Jazz Dance (1.5 per semester/maximum of 6) (GA) (BA) This course meets the Bachelor of Arts degree requirements. DANCE 240 is an exploration of Jazz Dance. The course is designed for any student with an interest in Jazz Dance and to support the Dance Studies Minor. This class explores the many styles and genres of jazz dance developed through American history. Emphasis is placed on the development of a personal jazz dance style, exploration, and self-expression. Jazz dance, as a technique class, has at its core, increasing the strength, alignment and flexibility of each dancer. Each semester the dancer will be introduced to different styles of jazz which will require a changing perspective of the body and its’ movement. Movement classes will be supported through viewing a variety of the dance styles being studied. In each style, daily movement experiences will be introduced to build coordination, flexibility and strength, as well as the understanding of the particular jazz dance idiom. These experiences will take place in the center floor, across the floor accumulations, and culminate in a combination of all these experiences in a dance to develop their potential as a performer. Connections to the social aspect of jazz dance will be consistently addressed, as all dance forms are vernacular in origin. Jazz dance, being a true American dance form, has its roots in the late 1800’s and early 1900’s with a pre-history in Africa and West Indies. The desire for self-expression through physical movement drove the dance form to a formal art expression on the concert stage. This connection to the
vernacular has been maintained in the jazz dance idiom. The exploration in Jazz Dance emphasizes the individual expression through movement in response to music particular to the style being presented in each semester.

Changes Effective Spring 2020:

• Description

DIGIT 100: Introduction to Digital Humanities (3 Credits: Maximum of 3 Credits) (GH)
Old Listing Effective Through Fall 2019:

DIGIT 100 students will study the ways computation is shaping literary, political, and historical discourses.

Changes Effective Spring 2020:

• Description
• Make Not Repeatable

DS 200: Introduction to Data Sciences (3 Credits)
Old Listing Effective Through Fall 2019:

Introduction to Data Sciences is an introductory survey course appropriate to a wide range of students. The course provides an overview of topics covered in more detail in advanced Data Sciences Courses. The course is multidisciplinary in nature, covering technical subjects such as basic aspects of machine learning, analyzing Big Data and visual analytics, but also examining the managerial aspects of data including data management and decision making, in addition to organizational and societal implications of increasing data collection and processing and their implications for privacy and security.

Changes Effective Spring 2020:

• Description
• Abbreviated Title
• Credits

DS 220: Data Management for Data Sciences (3 Credits)
Old Listing Effective Through Fall 2019:

This course has two components: (1) advancing students' knowledge on relational database and (2) introducing NoSQL databases. In the first component, the course will review the techniques learned in IST 210, strengthen students' skills in using SQL queries and introduce students about indexing and scalability issue in relational database. While relational database is still frequently used, the emergence of storage for big data and various types of data has driven a new of class of non-relational databases commonly referred to NoSQL database. This course will introduce the real-world needs for NoSQL databases and the characteristics that distinguish them from relational database. We will introduce both the concepts of NoSQL databases and how the concepts are implemented in the database systems. We will focus on three main NoSQL data models: key-value, column family, and document. Students will learn the concepts of these data models and know how to use them in the database systems. We will also introduce the concepts on graph database, hadoop system, and warehousing. Finally, we will present criteria that decision makers should consider when choosing between relationship between relational and non-relational databases and techniques for selecting the NoSQL database that best addresses specific use cases.

Prerequisites: Enforced Prerequisite at Enrollment: CMPSC 121 and IST 210

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

DS 310: Machine Learning for Data Analytics (3 Credits)
Old Listing Effective Through Fall 2019:

The course teaches students the principles of machine learning (and data mining) and their applications in the data sciences. DS 310 Machine Learning for Data Analytics (3) The course introduces the principles of machine learning (and data mining), representative machine learning algorithms and their applications to real-world problems. Topics to be covered include: principled approaches to clustering, classification, and function approximation from data, feature selection and dimensionality reduction, assessing the performance of alternative models, and relative strengths and weaknesses of alternative approaches. The course will include a laboratory component to provide students with hands-on experience with applications of the algorithms to problems from several domains. Prerequisites for the course include basic proficiency in programming, elementary probability theory and statistics, and discrete mathematics.

Prerequisites: Enforced Prerequisite at Enrollment: CMPSC 121 and STAT 318

Changes Effective Spring 2020:

• Prerequisite/Corequisite/Concurrent Courses

DS 410: Programming Models for Big Data (3 Credits)
Old Listing Effective Through Fall 2019:

Recommended Preparations: DS 310; CMPSC 448 This course introduces modern programming models and related software stacks for performing scalable data analytics and discovery tasks over massive and/or high dimensional datasets. The learning objectives of the course are that the students are able to choose appropriate programming models for a big data application, understand the tradeoff of such choice, and be able to leverage state-of-the art cyber infrastructures to develop scalable data analytics or discovery tasks. Building on data models covered in DS 220, this course will introduce programming models such as MapReduce, data flow supports for modern cluster computing environment, and programming models for large-scale clustering (either a large number of data samples or a large number of dimensions). Using these frameworks and languages, the students will learn to implement data aggregation algorithms, iterative algorithms, and algorithms for generating statistical information from massive and/or high-dimensional data. The realization of these algorithms will enable the students to develop data analytic models for massive datasets.

Cross-Listed Courses: CMPSC 410

Prerequisites: Enforced Prerequisite at Enrollment: CMPSC 122 and DS 220. Recommended Preparation: DS 310 or CMPSC 448.

Changes Effective Spring 2020:

• Prerequisite/Corequisite/Concurrent Courses
ECON 302H: Intermediate Microeconomic Analysis (Honors) (3 Credits) (H) (BA) (GS)
Old Listing Effective Through Fall 2019:

Allocation of resources and distribution of income within various market structures, with emphasis on analytical tools. ECON 302H Intermediate Microeconomic Analysis (Honors) (3) (GS) (BA) This course meets the Bachelor of Arts degree requirements. There are two branches within the discipline of economics: microeconomics, focused on the behavior of individual economic actors (consumers, firms, and government) and macroeconomics, focused on economic aggregates (e.g., inflation, unemployment, aggregate economic growth). There are four core courses in economics that are required of all majors and minors: introductory and intermediate courses in microeconomics and macroeconomics. This course is the upper-level core course in microeconomic analysis. Students will learn, at a deeper level than that covered in the beginning microeconomics course (ECON 002), and with extensive use of calculus, about supply and demand, consumer theory, the theory of the firm, market structure and market power, factor markets, and extensions to consider uncertainty, missing markets, and limited information. Students will develop their analytical skills for analysis of microeconomic issues. These skills, in turn, will be required for a substantial number of 400-level microeconomics-oriented courses. This course is a follow-on to the introductory course in microeconomic analysis, its prerequisite, going more deeply into the material covered in that introductory course in microeconomic analysis, and making extensive use of calculus. It is, in turn, a prerequisite for a large number of microeconomics-oriented courses at the 400 level. This honors version is designed to provide the opportunity for stronger students to pursue this key course at a more rigorous and in-depth level.

Prerequisite: ECON 102 and MATH 110 or MATH 140

Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

ECON 304H: Intermediate Macroeconomic Analysis (Honors) (3 Credits) (H) (BA) (GS)
Old Listing Effective Through Fall 2019:

Analysis of forces that determine the level of aggregate economic activity. ECON 304H Intermediate Macroeconomic Analysis (Honors) (3) (GS) (BA) This course meets the Bachelor of Arts degree requirements. There are two branches within the discipline of economics: microeconomics, focused on the behavior of individual economic actors (consumers, firms, and government) and macroeconomics, focused on economic aggregates (e.g., inflation, unemployment, aggregate economic growth). There are four core courses in economics that are required of all majors and minors: introductory and intermediate courses in microeconomics and macroeconomics. This course is the upper-level core course in macroeconomic analysis. Students will learn, at a deeper level than that covered in the beginning macroeconomics course (ECON 004), and with extensive use of calculus and economic models, about the measurement and structure of the national economy, long-run economic performance and the factors that influence it, business cycles and macroeconomic policy, and the environment and institutions that are pertinent to macroeconomic policy. Students will develop their analytical skills for analysis of macroeconomic issues. These skills, in turn, will be required for several 400-level macroeconomics-oriented courses. This course is a follow-on to the introductory course in macroeconomic analysis, its prerequisite going more deeply into the material covered in that introductory course in macroeconomic analysis, and making extensive use of calculus and formal models. It is, in turn, a prerequisite for a number of macroeconomics-oriented courses at the 400 level. This honors version is designed to provide the opportunity for stronger students to pursue this key course at a more rigorous and in-depth level.

Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

ECON 413: Economic Growth and the Challenges of World Poverty (3 Credits)
Old Listing Effective Through Fall 2019:

Challenges imposed by poverty; growth; growth rates; microfinance; foreign aid.

Prerequisite: ECON 304

Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

ENGL 1: Understanding Literature (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Explores how major fiction, drama, and poetry, past and present, primarily English and American, clarify enduring human values and issues. ENGL 001 Understanding Literature (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. In ENGL 001 students will study a wide variety of genres of literature — poetry, novel, short story, drama, perhaps even genres like the comic book — from different time periods and cultures to gain a better understanding of how literature explores human values and issues. These readings will be organized around important issues that relate to each other, or are in tension with each other, such as “Love,” “Violence,” and “Recuperation,” asking basic questions about how the different genres convey meaning, and how they ask significant questions about human relationships and ideals. For instance, readings including works by Toni Morrison, Shakespeare, J. M. Coetzee, August Wilson, Art Spiegelman, selections from each year’s best American Short Stories , and others might raise questions about violence and responsibility in times of extreme violence (like American slavery, South African apartheid, or the Holocaust), and speak to how we can judge violent acts during violent times, or how love can flourish or languish in the face of such horrors. Throughout the course, students will use the texts to ask such questions as: of what value is a play, a novel, a poem, or a short story? Is literature worthwhile for its ability to tell a good story or for its questions that do not lend themselves to easy answers? Are we “better” for having experienced literature? The course will also take advantage of literary events occurring on campus each semester—such as poetry readings, dramatic performances, even films relating to the course — to enrich the experience both of literature and of campus life. By addressing issues of contemporary significance, the course will not only prepare students for other literature courses, but will also help them make literature a regular part of their lives. ENGL 001 serves as a bedrock course in the mission of the humanities at Penn State. It prepares students for other academic courses that engage in the verbal and written analysis of complex written texts, and prepares them for other courses that explore human values and social and cultural elaborations of them (for instance, basic philosophy and history courses). Students should expect to complete three exams. The first two will consist of identification questions and short essays, and the third and
final exam will be a combination of identification questions and a take-home essay. Moreover students will write at least two papers for the course, demonstrating their abilities at literary analysis, and grappling with the themes of the course. Classroom discussion and general class participation will also be a factor in evaluation. ENGL 001 can be used as a general elective credit toward the major. The course will be offered once or twice a year with 60 seats per offering.

Changes Effective Spring 2020:

- Description

ENGL 82C: Literature and Empire (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Literature written in English from countries that were once part of European empires, e.g., India, Canada, South Africa, and others. ENGL 182C Literature and Empire (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. English 182C will constitute a wide ranging study of literature written in English, including novels, short stories, poems, plays, and prose, from countries that were once part of the British Empire or some other European empire. The class will approach this literature from a variety of thematic, historical, and/or generic vantages. Authors under consideration will vary from class to class, but may include writers such as Chinua Achebe, Buchi Emecheta, Alan Paton, David Malouf, Robertson Davies, Ngugi Wa Thiongo, J. M. Coetzee, R. K. Narayan, Amitabha Ghosh, Salman Rushdie, Christina Stead, Thomas Keneally, Jill Ker Conway, V. S. Naipaul, Wilson Harris, and Michael Ondaatje. Topics under consideration will vary from class to class, but the course will often discuss matters of race and ethnicity, as well as matters of religion, gender, sexual orientation and global context, where appropriate. The principle emphasis of the works in this course will be the recognition of non-European/non-American societies and the differences between their culture and that of Europeans or Americans. The conflicts generated by clashing cultures will drive the choice of readings. By the end of the course, students will have studied works from a minimum of five different cultural perspectives. This class will also prepare students to consider social and cultural problems from a variety of cultural perspectives. Students will be evaluated by means of essays written in and out of class, essay exams, term-long reading journals, and class participation. Students should expect to complete a minimum of three written assignments in the course of the term. The course may be used as English Major elective credit or as credit towards the English minor and will be offered once a year, when staffing restrictions permit, with 35 seats per offering.

Changes Effective Spring 2020:

- Description

ENGL 83: First-Year Seminar in English (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Critical approaches to the dimensions and directions in English/American literature and rhetoric.

Changes Effective Spring 2020:

- Description
- Number to 83S

ENGL 145: Modern Irish Literature (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Irish literature in the twentieth century and beyond; focus on the interplay of political, social, and cultural, forces on literature. ENGL 145 Modern Irish Literature (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. ENGL 145, Modern Irish Literature, will concentrate on Irish literature, history, and politics from the early twentieth century to the present. The course will begin with the socio-political implications of the Home Rule movement and the important figures associated with the rise of the Irish Literary Renaissance. Instructors will spend much of the course focusing on canonical figures of modern Irish Literature (such as Joyce, Yeats, Synge, Beckett, Shaw, O’Casey, O’Flaherty, and Lady Gregory). The course will introduce students to the political context and themes of Irish Literary Renaissance (Irish Literary Renaissance), including the notion of “cultural nationalism.” Instructors may draw upon contemporary literary critics, such as Declan Kiberd, Seamus Deane, and Terence Brown, by way of introduction to the ILR. The class will then move on to Post-World War II Irish Literature. In this component of the course, instructors will select literature from writers who began publishing in the Post-War era. These authors may be examined as they follow the legacy of the ILR, or as they challenge it and forge new courses for Irish literature. In other words, these authors can be written within or against the traditions and themes of ILR artists—or, more likely, doing both things at once. This component of the course will help students see the enduring legacy of the themes and forms of the ILR, as Irish authors continually reckon with its massive political and cultural inheritance. The course fulfills IL requirements in its emphasis on postcolonial relationships between Irish identity and culture and issues of British colonial occupation and the influence of American popular culture in the later twentieth century. The interpretive framework of postcolonial studies will inform the instructor’s approach to the literature. Postcolonial studies seeks to examine the conditions and tropes of colonial and post-colonial writers and peoples. While postcolonial studies offers broad theories and concepts that can be applied to any postcolonial scene, the movement nonetheless has an interest in studying and honoring the regional particularities and the specific reaction of its writers to the postcolonial moment. This play of the unifying, international experience of colonialism with the particularity of individual nations and writers helps students to become sensitive to ideas of nation, unity, and difference. More so, the tropes of postcolonial literature—and Irish literature especially—focus on concepts of hybridity, the Other, contact zones, modernity vs. tradition, national identity, and personal identity, all on which seek to understand the self and others within an intercultural context. The literature of the IRL also explores the corrosive effects of British imperialism, which helps students to consider whether “might makes right” and interrogate various forms of cultural imperialism, then and now. The literature of the IRL also promotes themes of intercultural understanding, featuring examples of reconciliation and compromise between tradition and modernity, and, more importantly, between Irish, American, and British characters. Students will be evaluated through writing assignments (about 15 pages of formal writing—the instructor can decide upon the number of papers and page length for the assignments), a midterm and final exam that feature essay responses, and class participation, which may include an online discussion forum (on ANGEL) and group presentations. These assignments will help students focus on issues of identity construction, and social and political conflicts within and between cultures (Ireland in relationship to British and American culture and influence) within a post-colonial context.

Changes Effective Spring 2020:

- Description
ENGL 179: Exploring the Literature of Food: Current Trends in American Food Writing and Environmentalism (3 Credits) (US) (GH)
Old Listing Effective Through Fall 2019:

Examines historical and contemporary American food literature.

Changes Effective Spring 2020:

- Description

ENGL 181B: Adventure Literature: Exploring Cape Cod (4.5 Credits) (US) (GH)
Old Listing Effective Through Fall 2019:

Examines the interconnection of culture and nature on Cape Cod through considerations of texts in various literary genres that have contributed to development of a distinctive regional identity and culture. ENGL 181B Adventure Literature: Exploring Cape Cod (4.5) The purpose of this course is to teach students how natural and cultural contexts contribute to the production of meaning in literary texts. In this case, the locality that serves as the focus of study is Cape Cod, arguably the most written-about locale in the United States. The course begins with classes devoted to the Cape's natural history—its formation and the ever-present effect of wind and water—and then moves to its early human history. Readings in the first part of the course will focus on the period just before and after European settlement and readings could include selections from William Bradford's Of Plymouth Plantation or Mourt's Relation, both contemporaneous accounts of the Pilgrim's landing on and exploration of the Cape and appropriate chapters from Paul Schneider's history of the Cape. The Enduring Shore, and Nathaniel Philbrick's excellent account of the Pilgrim adventure, Mayflower. These readings could be enhanced with selections on the European settlement of the Cape in Robert Finch's anthology of writing about the Cape, A Place Apart. This introductory material will lead to the major part of the course, which will be devoted to reading and study of classic literature about the Cape, such as Thoreau's Cape Cod, Henry Beston's The Outermost House, Wyman Richardson's The House on Nauset Marsh, and John Hay's The Great Beach, as well as selections of poetry poets associated with the Cape. Each of these works, in its time, represents the writer's attempt to somehow capture and come to terms with the landscape and natural exigencies of the Cape. The focus will then turn to representations of the Cape in the work of contemporary writers, and might include work by Michael Cunningham, Annie Dillard, David Gessner, Cynthia Huntington, and Mary Oliver among others. The course ends with a brief look at Cape Cod's literary and natural future as it has been imagined over the last 140 years. This course was designed to include an out-of-the-classroom education experience on Cape Cod. The trip to the Cape should include experiences related to the cultural and natural history of the Cape, such as Thoreau's Cape Cod, Henry Beston's The Outermost House, Wyman Richardson's The House on Nauset Marsh, and John Hay's The Great Beach, as well as selections of poetry poets associated with the Cape. Each of these works, in its time, represents the writer's attempt to somehow capture and come to terms with the landscape and natural exigencies of the Cape. The focus will then turn to representations of the Cape in the work of contemporary writers, and might include work by Michael Cunningham, Annie Dillard, David Gessner, Cynthia Huntington, and Mary Oliver among others. The course ends with a brief look at Cape Cod's literary and natural future as it has been imagined over the last 140 years. This course was designed to include an out-of-the-classroom education experience on Cape Cod. The trip to the Cape should include experiences related to the cultural and natural history of the region, and it should provide students the opportunities to walk in the footsteps of William Bradford, Thoreau, Beston, and Hay, as well as opportunities to see for themselves how the natural features that have inspired the classic and contemporary writers of the Cape will continue to inspire future generations of artists.

Changes Effective Spring 2020:

- Description

Add BA Humanities Designation

ENGL 181D: Adventure Literature: Exploring the Literature of American Wilderness (3 Credits) (US) (GH)
Old Listing Effective Through Fall 2019:

Examines the history and cultural impact of wilderness in America.

Changes Effective Spring 2020:

- Description

Add BA Humanities Designation

ENGL 182A: Literature and Empire (3 Credits) (US) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Literature written in English from countries that were once part of European empires, e.g., India, Canada, South Africa, and others. ENGL 182A Literature and Empire (3) (GH;US;IL)BA This course meets the Bachelor of Arts degree requirements. English 182A will constitute a wide ranging study of literature written in English, including novels, short stories, poems, plays, and prose, from countries that were once part of the British Empire or some other European empire. The class will approach this literature from a variety of thematic, historical, and/or generic vantages. Authors under consideration will vary from class to class, but may include writers such as Chinua Achebe, Buchi Emecheta,

forces at work on the barrier beach, with special attention to the ways in which great literature has taken what is described in the scientific literature and turned it into art. Examples for discussion could be drawn from the work of such writers as Henry Beston Rachel Carson, and Jan DeBlieu. The general concerns of the course then move to environmental ethics, specifically as ethical questions are embodied in literature’s representation of the human relationship with the other-than-human world. General ethical questions then lead to specific treatments of human and wild animal interaction by various writers. The point is to explore how writers represent the optimal sort of relationship humans can have with the wild world, and what such representation might mean to the ways we personally interact with nature. From these opening considerations, the course turns to an examination of the way in which writers who focus on a specific region of the coast—South Atlantic barrier islands, for example—establish a sense of the place in their writing. The course would then narrow its focus even more, moving from a consideration of a regional cultural identity to that of specific towns or narrowly defined areas within the general region. The subject of the narrower focus should then be explored in specific detail, beginning with pre-European cultures, the first explorers and settlers and then moving on to other aspects of the American culture history that make the subject area distinctive. For example, a course on the Low Country of South Carolina might start with the accounts of John Lawson, who published his journal of his own trip up the Santee River in 1701, move to accounts of the rice culture so important to the region in the nineteenth century and to an examination of the Gullah Geechee culture established by West African slaves on Low Country plantations, and then move to writing from more recent writers, all of which help to define the area's distinctive cultural and particularly its literary identity. This course was designed to include an out-of-the-classroom education experience. The enhancement trip should include experiences related to the cultural and natural history of the region. It should provide opportunities to walk in the footsteps of writers whose work is discussed in the classroom. There could be a course fee in addition to tuition for such enhancement experiences.

Changes Effective Spring 2020:

- Description

Add BA Humanities Designation
Alan Paton, David Malouf, Robertson Davies, Ngugi Wa Thiongo, J. M. Coetzee, R. K. Narayan, Amitabha Ghosh, Salman Rushdie, Christina Stead, Thomas Keneally, Jill Ker Conway, V. S. Naipaul, Wilson Harris, and Michael Ondaatje. Topics under consideration will vary from class to class, but the course will often discuss matters of race and ethnicity, as well as matters of religion, gender, sexual orientation and global context, where appropriate. The principle emphasis of the works in this course will be the recognition of non-European/non-American societies and the differences between their culture and that of Europeans or Americans. The conflicts generated by clashing cultures will drive the choice of readings. By the end of the course, students will have studied works from a minimum of five different cultural perspectives. This class will also prepare students to consider social and cultural problems from a variety of cultural perspectives. Students will be evaluated by means of essays written in and out of class, essay exams, term-long reading journals, and class participation. Students should expect to complete a minimum of three written assignments in the course of the term. The course may be used as English Major elective credit or as credit towards the English Minor and will be offered once a year, when staffing restrictions permit, with 35 seats per offering.

Changes Effective Spring 2020:

• Description

ENGL 191: Science Fiction (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Science fiction as the literature of technological innovation and social change--its development, themes, and problems.

Changes Effective Spring 2020:

• Description

ENGL 192: The Literature of Fantasy (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Literature(s) of fantasy from early forms through a variety of contemporary traditions. ENGL 192 The Literature of Fantasy (3) (GH) (BA) This course meets the Bachelor of Arts degree requirements. Perhaps more than any other genre of speculative fiction, fantasy is richly varied. This course examines the development of literary traditions in fantasy literature from their earliest origins in mythology and folklore, through the historical development of classic fantasy works, into the books, movies and other fictions of the modern day. The course also explores different critical and theoretical approaches to the student's work and related artistic traditions, as surrealism and magical realism. In addition to completing primary readings, students will engage in weekly lecture/discussions of materials. Evaluation for the course includes essay exams and a course project. English 192 satisfies the GH requirement. The course can count toward the major and toward the minor in English. Class size, frequency of offering, and evaluation methods will vary by location and instructor.

Changes Effective Spring 2020:

• Description

ENGL 194: Women Writers (3 Credits) (US) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Short stories, novels, poetry, drama, and essays by English, American, and other English-speaking women writers. ENGL (WMNST) 194 Women Writers (3) (GH;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. English 194 will constitute a wide ranging study of works by American, British, and other English-speaking women writers, including novels, short stories, poems, plays, and prose. The class will approach this literature from a variety of thematic, historical, and/or generic vantages. Authors under consideration will vary from class to class, but may include writers such as Bradstreet, Woolstonecraft, C. Rosefi, M. Shelley, Austen, C. Bronte, E. Bronte, G. Eliot, D. Wordsworth, Dickinson, Wharton, Stowe, Freeman, Jewett, Fuller, H.D., Moore, Sitwell, Bishop, Brooks, Plath, Cather, Woolf, Stein, Lessing, Bowen, O'Connor, Welty, Porter, Oates, Olsen, Sarton, Gordimer, Atwood, Morrison, Kinkaid, McCarthy, and Churchill. The course seeks to make students aware of the extensive body of literature written by women through the analysis, evaluation, and appreciation of specific works by women writers. The course also seeks to help students understand the female perspectives--the varying values and interests of women--reflected in the texts at hand and to position these perspectives within wider social, historical, and political contexts. The course also seeks to make students aware of the special problems faced by both women writers and the female inhabitants of the societies they describe in their work. As a course in women's literature, ENGL/WMNST 194 concerns itself with questions of gender. In so far as some of these women writers are black or women of color, it concerns itself with questions of race and ethnicity. As far as the course looks at women's literature in the context of men's literature, it is concerned with the inter-relationship between dominant (male) and non-dominant (female) culture in the United States as well as in Britain. In so far as the course covers lesbian writers, it is concerned with sexual orientation. Topics under consideration will vary from class to class, but may include a chronological introduction to the development of women's literature, a consideration of a principle theme or themes common to women's literature through a number of works from across a number of historical periods, a consideration of a number of women's works in the context of historical events central to their creation, a consideration of a number of women's works in the context of formal or aesthetic elements common to those works and their various effects. Time allotted for the study of the works under consideration will vary. This class will prepare students for advanced courses in women's literature as well as other academic courses that engage in the verbal and written analysis of complex written texts. Students will be evaluated by means of essays written in and out of class, essay exams, term-long reading journals, and class participation. Students should expect to complete a minimum of three written assignments in the course of the term. The course may be used as English Major elective credit or as credit towards the English Minor and will be offered once a year with 60 seats per offering.

Cross-Listed Courses: WMNST 194

Changes Effective Spring 2020:

• Description

ENGL 201: What is Literature (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Acquaints students with theory and practice relevant to studies of narrative, lyric poetry, and drama. ENGL 201 What is Literature (3) (GH) (BA) This course meets the Bachelor of Arts degree requirements. English 201 will familiarize students with theories and practices that are foundational for thinking about literature, and for studying narrative fiction, poetry, and drama. The course will pose such questions as "what is narrative fiction?", "what is poetry?", "what is drama?" It will introduce students to how conventions of literary genres operate, how they generate meaning, and how they require and manipulate readers' responses. English 201 will also encourage students to explore
whether or not literary discourse, as instanced in the genres that have been named, can be distinguished from other written or spoken discourses. While asking such questions, the course will acquaint students with technical vocabularies used by literary scholars and literary historians, and will provide students with sample scholarly rationales for hypothesizing the singularity of literary discourse, for constructing literary history, and for understanding literature's relation to life. It will teach students close analytic practices of reading, both those that have shaped the discipline of English studies and those emerging currently. Students will be evaluated in English 201 by means of essays written in and out of class, essay exams, and class participation. The course will be required of all English majors and will be a part of their 36 credit degree requirement. The course will be offered in both Fall and Spring semesters with 25 seats per offering.

Prerequisite: ENGL 015 or ENGL 030

Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

ENGL 202B: Effective Writing: Writing in the Social Sciences (3 Credits) (GWS)

Old Listing Effective Through Fall 2019:

Instruction in writing persuasive arguments about significant issues in the social sciences. (A student may take only one course for credit from ENGL 202A, 202B, 202C, and 202D.)

Prerequisite: ENGL 015 or ENGL 030; fourth-semester standing

Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

ENGL 221W: British Literature to 1798 (3 Credits) (WF) (BA)

Old Listing Effective Through Fall 2019:

Introduction to literary history and analysis. Beowulf and writers such as Chaucer, Shakespeare, Donne, Milton, Swift, Pope, and Fielding.

Prerequisites: ENGL 15; ENGL 30

Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Add GH Designation

ENGL 228: Introduction to Disability Studies in the Humanities (3 Credits) (IL) (GH)

Old Listing Effective Through Fall 2019:

Provides a humanities-based interdisciplinary introduction to Disability Studies.

Changes Effective Spring 2020:

- Description
- AbbreviatedTitle
- Add US Designation
- Remove IL Designation

ENGL 232: American Literature from 1865 (3 Credits) (BA) (GH)

Old Listing Effective Through Fall 2019:

Introduction to literary history and analysis; writers such as Mark Twain, James, Cather, Frost, O'Neill, Faulkner, Hemingway, Hughes, and Morrison. ENGL 232 American Literature from 1865 (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. Focusing on major writers and their cultural contexts, English 232 surveys American literature from 1865 to the present. A remarkable amount of important literature was produced during this period. Students will read major texts like The Great Gatsby, The Grapes of Wrath, and Beloved; learn about renowned authors such as Ernest Hemingway, Flannery O'Connor, and James Baldwin; and be introduced to influential literary forms, such as the imagist poem, the modernist novel, and New Journalism. The tradition of American literature since 1865 evolved over periods of significant upheaval and change. Students will also learn about the shifting historical and ethical orientations that energized this tradition, from Naturalism to Modernism and Postmodernism. As an introductory survey of American literature, English 232 welcomes non-majors: no previous course in literature is
required. By reading and discussing some of the most important works in American literature, students will sharpen their skills of interpretation while surveying an important literary tradition.

Prerequisite: ENGL 015; ENGL 030; ENGL 137H; or ENGL 138T

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses
• Add US Designation

ENGL 232W: American Literature from 1865 (3 Credits) (WF) (BA)
Old Listing Effective Through Fall 2019:

Introduction to literary history and analysis. Writers such as Mark Twain, James, Cather, Frost, O'Neill, Faulkner, Hemingway, Hughes, and Morrison.

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses
• Number to 232Y
• Add US Designation
• Add GH Designation

ENGL 263: Reading Poetry (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Elements of poetry including meter, rhyme, image, diction, and poetic forms in British, American, and other English-language traditions.

Prerequisite: ENGL 015; ENGL 030

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

ENGR 350: Computational Modeling Methods (3 Credits)
Old Listing Effective Through Fall 2019:

Theoretical and hands-on experience of mathematical modeling in mechanical systems; 2D thermal stresses, beam elements, solid modeling and vibrations. ENGR 350 Computational Modeling Methods (3) Computation and Modeling Methods is intended to introduce students to strategies in mathematical modeling of physical phenomena using ANSYS. The course provides theoretical understanding and hands-on experience of the modeling techniques used in engineering practice and allows students to apply these skills to engineering computational problems. Modeling of engineering processes requires users to have a working knowledge of ANSYS and modeling techniques such as mesh construction and analysis. This course teaches the principles of mathematical modeling of various physical phenomena and allows students to learn the basic strategies of mathematical modeling and advanced mesh analysis on topics involving structural, thermal, and materials engineering.

Prerequisite: E MCH 213; M E 300 OR EME 301; CMPSC 201 OR CMPSC 200

Changes Effective Spring 2020:

• Description
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

ENVST 100: Visions of Nature (3 Credits) (BA) (GS)
Old Listing Effective Through Fall 2019:

An interdisciplinary introduction to environmental studies, including perspectives from ethics, economics, public policy, art, literature, history, geology, biology, and ecology. ENVST 100 ENVST 100 Visions of Nature (3) (GS) (BA) This course meets the Bachelor of Arts degree requirements. An interdisciplinary introduction to environmental studies, including perspectives from environmental ethics, economics, public policy, art, literature, history, geology, biology, and ecology. This course may be team-taught and include field and laboratory work. Students will be introduced to interdisciplinary study of the environment with an overview of nature’s role as subject matter in a variety of academic disciplines. Students will examine the formative value of nature in our cultural history, consider the role of nature in our current value systems and social and economic structure, and be introduced to the theory and practice of ecological science. Students should achieve a broad understanding of the value (not just economic) of living things and their habitats. The course will demonstrate how information from different fields can interconnect. It also serves as the “gateway” course for students intending to major in an interdisciplinary environmental studies program, introducing the program’s concerns, aims, and goals and the varied academic perspectives to be built upon in later coursework.

Changes Effective Spring 2020:

• Description
• Remove GS Designation
• Add GH Designation
• Add Inter-Domain Designation
• Number to 100N

ERM 151: Careers and Issues in Environmental Resource Management (1 Credit)
Old Listing Effective Through Fall 2019:

Career opportunities and topical issues in the environmental sciences. E R M 151

Careers and Issues in Environmental Resource Management (1) The course is designed to introduce students to the environmental resource management field early in their academic experience. The course is the first required E R M course for students in the major and the minor. Weekly presentations are made by E R M graduates and Penn State faculty and student interns. Course objectives include: discuss topical issues in environmental sciences and resource management; familiarize students with career opportunities for E R M graduates; provide feedback from graduates to students on enhancing their Penn State experience; enhance critical thinking and communication skills; create an opportunity to address student questions about the E R M program. Two types of writing assignments (PIT and PDP) are designed to enhance the learning process and to serve as a basis for awarding a course grade. The PIT (Putting It Together) is written by each student during the last 10 minutes of each class period, and requires the student to focus on one point made by the speaker and to either explain how the point contributes to the students understanding or explain why they disagree with or have questions about the point. Students are instructed to consider the audience for their PIT to be lay people and that the PIT should simulate a letter to the editor or an Op Ed piece. The PDP (Personal/
Professional Development Plan) is developed by each student throughout the semester. It is designed to facilitate the establishment/refinement of career goals and objectives, and to be an action plan for their Penn State experience. Students receive feedback on their draft PDP early in the semester. Student progress is assessed by evaluating the PDP and the PDPs. The course grade is weighted 48% PITS, 17% draft PDP and 35% final PDP. A conventional auditorium-style classroom that can accommodate up to 100 students is required. The course is offered each fall semester at the University Park campus. Current and projected enrollments are 75-100 students. The course could be offered at other Penn State campuses utilizing distance learning technologies.

Changes Effective Spring 2020:
• Description
• Abbreviated Title

FR 139: France and the French-speaking World (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:
An introduction to the culture of France and its impact on the world. FR 139 France and the French Speaking World (3) (GH; IL; BA) This course meets the Bachelor of Arts degree requirements. By studying the artistic, social, and intellectual components of the French cultural ethos, the undergraduate student will develop an appreciation of a major Western European humanistic tradition and its impact and adaptation on several continents. The notion of a national culture, which has become an international phenomenon integrates a broad spectrum of subject areas in the arts, humanities, and social sciences. The elements to be articulated embrace: socioeconomic, linguistic, and demographic profiles, social stereotypes (internal, external, and colonial), social structures (family, gender, childhood/old age), and selected “high” and “popular” cultural themes (cuisine, architecture, dress, painting, social philosophy). Using today’s metropolitan French culture as a point of departure, and its historical legacy, the course will explore the consequences of French cultural hegemony in various French-speaking areas (Belgium, Switzerland, North and West Africa, North America, Maghreb-Middle East, Orient). In brief, the course introduces Penn State students to the dynamics of cultural pluralism, a crucial acquisition in today’s “global village.”

Changes Effective Spring 2020:
• Description

GAME 220: Introduction to Game Design (3 Credits) (GA)
Old Listing Effective Through Fall 2019:
Design of games as aesthetic objects and cultural artifacts that people find meaningful and entertaining.

Changes Effective Spring 2020:
• Description

GAME 250: Technical Game Development (3 Credits) (GQ)
Old Listing Effective Through Fall 2019:
Introduction to the tools and techniques required to implement games in a virtual environment. GAME 250 (CMPSC 208) Technical Game Development (3) First, students learn about game and player elements by creating characters and objects and the means of user interactivity. Both orthographic and perspective views are introduced to assist in character design. Objects and characters are created using fundamental geometric primitives like scale, rotation, translation and extrusion. The set operations, union, intersection, and subtraction, are applied to create compound objects. Bezier and NURB curves are introduced to create objects with irregular contours. Students also learn to design graphical user interfaces (GUIs) and handle mouse and keyboard events to support user interactions. Second, students are introduced to methods of storytelling and guide them to build narratives for games. Methods of proximity and collision detection in the environment are studied for both static and dynamic objects. Dynamic objects are programmed to move and behave in a deterministically, random, or probabilistically under a variety of lighting methods including ambient, directional, point and diffuse lights are introduced. A number of particle systems are developed with different considerations of randomness, vector direction and velocity. The concept of linear interpolation is illustrated and applied to texture mapping to improve the look and feel of objects. Third, students are introduced to functions, propositional logic, loops, and randomness to model game behavior. Students will learn to combine a series of primitive actions into a function for control and reuse. Propositional logic will guide students to define conditions and develop game rules. Loops are introduced to simplify the implementation of repeated game behavior. Randomness enables the simulation of many life-like object movements. Students will learn and practice how to write concurrent, event or sequential processing algorithms for game objects. Fourth, students are introduced to the game development process of pre-production, production and post-condition phases and have them apply it to their own project. The topic of maintenance will be introduced with an emphasis on refactoring techniques, critical to improving the quality of game and providing flexibility for future updates. This course has a significant applied element. Game engine tools are used to develop prototypes of games and playtest them. Lab assignments are given throughout the semester and a final project requires students to demonstrate mastery of all aspects of the course.

Cross-Listed Courses: CMPSC 208

Changes Effective Spring 2020:
• Abbreviated Title
• Add Quantification Designation

GAME 251: 2D Game Programming (3 Credits) (GQ)
Old Listing Effective Through Fall 2019:
Introduction to programming 2D Games with HTML5 and Javascript. GAME 251 2D Game Programming (3) (GQ) An introductory course on web programming, GAME 251 introduces students to HTML Programming for online, browser-based, and mobile games. HTML is a versatile programming markup language that allows for a lot of flexibility in game development. Throughout the course, students will learn HTML programming using the Canvas element, programmed in Javascript, using a variety of engines and technologies. Students will receive a primer in database management using MySQL, and will interface that database with their games using AJAX calls through PHP. The versatility and cross-platform nature of the HTML programming standard allows games to be compiled across numerous platforms seamlessly - a practice with which students will become accustomed.

Prerequisite: MATH 21

Changes Effective Spring 2020:
• Abbreviated Title
• Add BA Quantification Designation
GEOG 489: GIS Application Development (3 Credits) (BA)
Old Listing Effective Through Fall 2019:

Advanced topics in GIS customization, including the Systems Development Life Cycle, packaging and deployment, and consuming Web services. GEOG 489 GEOG 489 GIS Application Development (3)(BA) This course meets the Bachelor of Arts degree requirements. GEOG 489 is an elective course in the Master of Geographic Information Systems degree program. The course consists of readings, quizzes, projects, and discussions about advanced GIS programming concepts and techniques. It builds on the material covered in GEOG 485: GIS Programming and Customization. Students will work with ESRI's ArcObjects component library to customize ArcGIS software products using Visual Studio.NET as their development platform. Students who successfully complete the course are able to use the Systems Development Life Cycle methodology to build custom GIS solutions. They are able to package and deploy their customizations through dynamic link libraries (DLLs) and register them with ArcGIS, a more robust deployment solution than those covered in GEOG 485. Students are also able to explain the fundamental differences between COM and .NET software development. Lastly, they are able to consume web services and integrate them into custom Web applications. The course is ten weeks in length and requires approximately 100 hours of student activity. It is offered quarterly (starting in January, April, July, and October).

Prerequisites: GEOG 485

Changes Effective Spring 2020:

- Description

GREEK 102: Intermediate Ancient Greek (4 Credits) (BA)
Old Listing Effective Through Fall 2019:

Intermediate study of classical Greek grammar, syntax, and vocabulary. GREEK 102 Intermediate Ancient Greek (4)(BA) This course meets the Bachelor of Arts degree requirements. GREEK 102 continues from GREEK 101, which is prerequisite for enrollment. After a brief review of key grammar and morphology from the first semester, the course will complete the process of providing students with a sufficient grasp of Greek vocabulary, morphology and syntax to enable them to read unadapted passages from ancient Greek authors (with the aid of a lexicon) by the end of the course. Class sessions will focus on grammar drills, sentences, and similar exercises as homework to supplement class work. As the semester progresses, students will read more and more from Greek authors themselves rather than either Greek composed by the textbook authors or adapted ancient Greek passages, so that when students enter more advanced classes, they will find the transition to reading Greek as smooth as possible. In tandem with the increasing emphasis on Greek written by ancient Greeks, the course will continue to focus on the cultural milieu of ancient Athens in particular as a background for the texts that the students read. Basics of Greek history, archaeology, and philosophy will be introduced as relevant to the texts that the students read. Students will be evaluated on a combination of written work, including frequent tests and quizzes; homework completion; and course attendance and participation. GREEK 102 will prepare students to continue with courses in Greek at the 400-level. Students may select to use GREEK 102 to fulfill either a 3-credit requirement for a course in Greek or Roman language, literature, civilization, or archaeology or the requirements for 9 credits in courses related to Classics and Ancient Mediterranean Studies within the Common Requirements for the Major. Students desiring to fulfill the B.A. requirements for 12th-credit level foreign language in Greek may do so by successfully completing a 400-level course in Greek. This course will be offered once a year with 24 seats per offering.

Prerequisite: GREEK 101

Changes Effective Spring 2020:

- Description
GREEK 203: Greek Reading and Composition (4 Credits)
Old Listing Effective Through Fall 2019:
The course reviews ancient Greek grammar, syntax, and vocabulary and introduces students to Greek poetry and prose.
Prerequisite: GREEK 102

Changes Effective Spring 2020:
• Add BA All Foreign Language Designation
• Add BA Humanities Designation
• Description

GREEK 420: Greek Prose Authors (3-6 Credits: Maximum of 6 Credits) (BA)
Old Listing Effective Through Fall 2019:
Readings in representative authors.
Changes Effective Spring 2020:
• Credits to Repeatable to 12
• Description
• Prerequisite/Corequisite/Concurrent Courses

GREEK 425: Greek Historians (3-6 Credits) (BA)
Old Listing Effective Through Fall 2019:
Translation and study of one or more of the ancient Greek historians. GREEK 425 Greek Historians (3-6)(BA) This course meets the Bachelor of Arts degree requirements. GREEK 425 is a reading course in ancient Greek focusing on one or more of the major ancient Greek historians (usually Herodotus, Thucydides, or Xenophon, or Polybius). The course is designed to advance the student's fluency in reading Greek prose, while at the same time enriching their understanding of Greek civilization and history by a thematic choice of historical readings. The course may concentrate on one author or may address a thematic issue with readings from a variety of Greek historians. For example, readings may be selected from Herodotus’ accounts of ancient Egypt. Or readings may focus on a comparative study of Thucydides’ and Polybius’ reasons for writing history. The major portion of class time will be devoted to translating prepared passages. These passages will also be the basis for discussing grammatical forms, as well as stylistic issues in prose writing. The class will also include discussions of historical themes relevant to the readings. Students’ work in the course will be evaluated based on class participation, three in-class tests, a final examination, and a term research paper or oral presentation. GREEK 425 is one of a series of advanced Greek poetry and prose courses that allows students to gain skill and knowledge about a range of ancient Greek literature. This course requires a mastery of basic Greek grammar and vocabulary acquired in GREEK 003, 102, or their equivalent. GREEK 425 may be used to fulfill several requirements for the CAMS major including the requirement of courses in Greek and Roman language, literature, and archaeology, and a 400-level course in a related area. The course is particularly designed for students who select the Language Option of the major, which requires four courses at the 400-level in Greek or Latin.
Prerequisite: GREEK 102

Changes Effective Spring 2020:
• Credits to Repeatable to 6
• Description
• Prerequisite/Corequisite/Concurrent Courses

GREEK 430: Greek Poetry (3-6 Credits) (BA)
Old Listing Effective Through Fall 2019:
Translation and analysis of selected readings in Greek poetry. GREEK 430 Greek Poetry (3-6)(BA) This course meets the Bachelor of Arts degree requirements. GREEK 430 is an advanced Greek literature course in which students will read 1200-1500 verses of a non-dramatic genre of ancient Greek poetry (in different years the course is offered, this might be epic, lyric, bucolic, or didactic poetry). Students also will read in English the entire output of the author they are studying. The overall goals of the course are as follows: (1) to increase the ease and fluency of advanced-level students with ancient Greek in general and poetic idiom in particular; and (2) to expose students to a limited amount of scholarly literature and give practice in understanding and evaluating a scholarly argument in relation to a primary text with which they are familiar. Students will be expected to enter the class with a comfortable level of reading skill (as acquired in GREEK 003, 102 or their equivalent); the course will not cover grammar, nor will all the assigned readings in Greek be translated in class. Emphasis is on reading a generous amount of poetry in the original Greek and on literary interpretation. The approach in the classroom will change as the term progresses. Initially, classes will be more lecture-driven in order to explain the background and characteristics of the poetry being read. Translation assignments early in the semester will be relatively short (30-50 verses per class). As students gain in ease and familiarity with the Greek they are reading, assignments will become longer (with a goal of approximately 100 verses per class by the end of the term) and students will assume an increasing proportion of the responsibility for conducting individual class sessions, culminating in student presentations at the end of the semester. GREEK 430 is one of a series of advanced Greek poetry and prose courses that allows students to gain skill and knowledge about a range of ancient Greek literature. GREEK 430 may be used to fulfill several requirements for the Classics and Ancient Mediterranean Studies major including the requirement of courses in Greek or Roman language, literature, or archaeology and a 400-level course in a related area. The course is particularly designed for students who select the Language Option of the major, which requires four courses at the 400-level in Greek or Latin. Students will be evaluated through class participation, quizzes, tests, an oral presentation, and a final exam. The course will be offered once every other year and will offer 20 seats per offering.
Prerequisite: GREEK 102

Changes Effective Spring 2020:
• Credits to Repeatable to 6
• Description
• Prerequisite/Corequisite/Concurrent Courses

GREEK 440: Greek Drama (3-6 Credits: Maximum of 6 Credits) (BA)
Old Listing Effective Through Fall 2019:
Translation and study of a selected play. GREEK 440 Greek Drama (3-6)(BA) This course meets the Bachelor of Arts degree requirements. GREEK 440 is an advanced Greek drama course in which students will read 1200-1500 verses of an ancient Greek drama. Students also will read in English additional plays by the author they are studying. The overall goals of the course are as follows: (1) to increase the ease and fluency of advanced-level students with ancient Greek in general and dramatic
forms of learning are used in this course. A textbook gives the student
and popular—and its contribution to a distinctly medieval society. The
collapse of central Roman authority through the rise of local chiefdoms
development of political, judicial and diplomatic institutions, from the

HIST/MEDVL 107 is an introductory course on the history of Europe
(GH;IL)(BA) This course meets the Bachelor of Arts degree requirements.
Rise and development of the civilization of medieval Europe from the
decline of Rome to 1500. HIST 107HIST (MEDVL) 107 Medieval Europe (3)

Old Listing Effective Through Fall 2019:

Changes Effective Spring 2020:

- Description

Prerequisite/Corequisite/Concurrent Courses

HIST 12: History of Pennsylvania (3 Credits) (US) (BA) (GH)
Old Listing Effective Through Fall 2019:

Chronological and topical survey, emphasizing immigration of diverse
ethnic groups and religious, political, economic, and social developments,
including industrialization and urbanization.

Changes Effective Spring 2020:

- Description

HIST 107: Medieval Europe (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Rise and development of the civilization of medieval Europe from the
decline of Rome to 1500. HIST 107HIST (MEDVL) 107 Medieval Europe (3)
(GH;IL)(BA) This course meets the Bachelor of Arts degree requirements.
HIST/MEDVL 107 is an introductory course on the history of Europe
from the late classical period to the beginning of the sixteenth century.
There are three main areas of concentration in this course. First, the
development of political, judicial and diplomatic institutions, from the
collapse of central Roman authority through the rise of local chiefdoms
to the centralized kingdom as ancestor of the modern state. The second
theme is the role of Christianity in all its forms—orthodox, heretical,
and popular—and its contribution to a distinctly medieval society. The
third main theme is the development of society following changes in
economic activity, cultural interest and the extended family. Several
forms of learning are used in this course. A textbook gives the student

a broad overview of the period and gives a chronological structure to
the material. This material provides a background to the instructor’s
lectures, which not only give factual information, but integrate the
various trends, individuals and events. The assigned readings illustrate
specific events or individuals; the discussion groups allow the student
to explore these texts in a collaborative environment with the instructor
and their fellow students. The research paper gives the student the
opportunity to investigate a specific topic of interest, while training them
in scholarly writing and analysis. Finally, the tests, all essay questions,
let students demonstrate their comprehension of the material through
problem solving. The essay exams and discussion groups allow the
student actively to address specific problems from the material, the
research paper enables the student to gather information from traditional
(library archives) and non-traditional (electronic) sources, then to
present a conclusion in a comprehensive and coherent argument; The
class discussion promotes collaborative and cooperative learning, as
the students expand on, and/or argue against, positions taken on the
material by their instructor and fellow students. Internationalism and
interculturalism is the essence of this course. The research paper, essays
and discussion allow for scholarly development through the investigation
of communities in an important era of history.

Cross-Listed Courses: MEDVL 107

Changes Effective Spring 2020:

- Description

HIST 109: Introduction to U.S. Environmental History (3 Credits)
(US) (BA) (GH)
Old Listing Effective Through Fall 2019:

An introduction to the changing relationships between human beings
and the natural world in American history. HIST 109 Introduction to U.S.
Environmental History (3) (GH;US)(BA) This course meets the Bachelor
of Arts degree requirements. Taking the United States as its focus, this
course provides an introduction to environmental history as a field
of scholarship that examines changing relationships between human beings
and the natural world. Environmental history centers on the examination
of various questions about such relationships, including exploring how
natural forces shape history, how humankind affects nature, and how
those ecological changes then reciprocally influence human life. A
core message of the course will be that environmental factors do not
deterministically shape history, but rather structure the possibilities open
to human beings. Major themes of the course include: (1) recognizing
that American history has a natural context; (2) that relationships
between nature and culture change over time; and (3) that knowledge
about nature is socially constructed and historically contingent. The
course will examine the increasing speed and geographic spread
of human-driven changes to the environment and provide students
with the historical context necessary to appreciate contemporary
environmental dilemmas. This course is intended as an introduction, with
no prerequisites, though general familiarity with American history will
be helpful. Course meetings and assignments are designed to encourage
comparing and contrasting points of view on questions such as: How has
the non-human world shaped the course of American history? What were
the environmental impacts of historic changes in the ways Americans
produced and consumed resources? What ideas shaped the ways
different groups of people defined and used specific resources? What role
have science and technology played in changing popular attitudes about
the human place in the world? How did America’s environment shape the
political, social, and economic development of the United States? How
have changes in American relationships with nature interacted with other
global change processes and recognitions of the need to develop more sustainable societies?

**Changes Effective Spring 2020:**

- Description

**HIST 117: Women in Modern History (3 Credits) (GH) (US) (IL) (BA)**

Old Listing Effective Through Fall 2019:

Modernization and women: changing images and roles since mid-eighteenth century in the family, workshop, politics, society; cross-cultural comparisons. HIST 117/WMNST 117 Women in Modern History (3) (GH;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. History/Women's Studies 117 is an introductory survey of women in the United States and possibly elsewhere, from the seventeenth to the late twentieth century. The course examines women's history from several different perspectives. First, it introduces students to the methods, sources, and questions of the past thirty years of women's history-writing, and asks students how studying women transforms our understanding of history more generally. Second, it offers a survey of the narrative of modern women's history, stressing women's interactions with the larger processes of economic and political change, their relationship to changing ideologies of gender and feminism, and their complex identities not only as women but as members of a particular race, class, ethnic, and religious group. Throughout, students will ask when gender, and when some other aspect of women's lives and identities, is most salient in identifying the restrictions and opportunities they faced. Third, students will assume the perspective of historians themselves, as they examine primary sources and attempt to make analytic and historical judgments about what they say and why they matter to the larger narrative. Through significant essay-writing assignments, students will develop analytical and writing skills in learning to think historically about women. Questions about race, class, ethnicity, and sexual orientation, as well as gender, are intrinsic to this course. Students will be evaluated based on their class participation, papers, and final exam. This course is cross-listed in History and Women's Studies and fulfills requirements for both programs' majors and minors. History/Women's Studies 117 will be accepted, but not required, for the History Major, the Women's Studies Major, and the Women's Studies Minor. This course will be offered once a year with up to 70 seats per offering.

Cross-Listed Courses: WMNST 117

**Changes Effective Spring 2020:**

- Description
- Add BA Humanities Designation
- Remove US Designation

**HIST 140: The Israel-Palestine Conflict (3 Credits: Maximum of 3 Credits) (IL) (GH)**

Old Listing Effective Through Fall 2019:

Roots of the Israel-Palestine conflict; relations between Arabs and Jews in the Middle East from 19th century to present. HIST (J ST) 140 Jews and Arabs in the Modern Middle East (3) (GH;IL)(BA) This course analyzes the Israel-Palestine conflict in the larger context of Jewish-Arab relations in the modern Middle East. Examination of the seeds of the conflict to the present day. Roots of the conflict between Jews, Palestinians, and Arabs reach back into the late Ottoman period but the First World War constituted a major turning point, when the project of a Jewish state in Palestine took shape as the Ottoman Empire collapsed. The 1917 Balfour Declaration provided an enormous boost to the relatively small Zionist movement. About 300,000 Jews moved to Palestine during the interwar period, with most Jewish migrants driven initially by economic rather than ideological motives. Some Jewish settlers established good relations with local Palestinians. But tensions erupted in the cities, not least over landownership. Clashes continued during the early 1930s. The aftermath of World War II constituted the second major turning point. After 1945 Britain withdrew from the Middle East while large numbers of Jewish refugees from Eastern Europe migrated to Palestine. After the Israeli declaration of independence in 1948, the new Arab states declared war on the newly founded state. Israeli troops expelled large numbers of Palestinians permanently from their homes. At the same time almost all Jews were expelled from most Arab states and settled overwhelmingly in Israel. The course follows the main clashes between Israel and its neighbors without ignoring the internal relations, especially between Jews and Israeli Arabs, and Jews and Palestinians in the occupied territories. The main clashes that will be discussed are the Suez crisis of 1956; the 1967 Six-Day War; the 1973 Yom Kippur War; the bold 1977 peace initiative of Egyptian leader Anwar El-Sadat which led to the 1979 peace accord between Israel and Egypt (and eventually to a détente with Jordan); the 1982 Lebanon War and the first Intifada (protest wave by Palestinians in the occupied territories); the Oslo Peace Process during the 1990s; the Second Intifada and recent developments, especially the implications of Israel's settlement building in the West Bank. The course concludes with a discussion of potential scenarios for the relationship between Jews and Arabs in the Middle East during the 21st century.

Cross-Listed Courses: JST 140
HIST 150: America in the 1960s: An Introduction (3 Credits) (US) (BA) (GH)
Old Listing Effective Through Fall 2019:
An introduction to the history of the United States in the 1960s. HIST 150 America in the 1960s: An Introduction (3) (GH;US)(BA) This course meets the Bachelor of Arts degree requirements. An introduction to the history of the United States during the 1960s. Assuming no previous knowledge of the era, we welcome students with a variety of backgrounds. Topics covered will include the leadership of John Kennedy, Lyndon Johnson, and Richard Nixon; the struggle for civil rights for people of color; the emergence of student movements across the country; the steady escalation of US involvement in Vietnam; shifting relations across gender lines, and particularly the rise of the modern feminist movement; and, finally, the growing influence of popular culture, such as music, literature, and film.

Changes Effective Spring 2020:
- Description
- Title
- Add BA Other Cultures and BA Humanities Designations

HIST 152: African American History (3 Credits) (US) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:
African roots; colonial and revolutionary experiences; slavery and abolitionism; civil war and reconstruction; accommodation and protest; the new militancy.

Cross-Listed Courses: AFAM 152

Changes Effective Spring 2020:
- Description
- Abbreviated Title
- Add Cross Listing AMST 150

HIST 181: Introduction to the Middle East (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:
Origins of Islamic civilization; expansion of Islam; the Ottoman Empire; the Middle East since 1918. HIST 181 / JST 181 Introduction to the Middle East (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. This course presents a survey of the history of the Middle East from the rise of Islam to the current day. The objectives are to help students develop the vocabulary and historical background to discuss and evaluate contemporary events and debates, stimulate interest in the varied historical experiences and diverse societies and cultures of the region, and provide a foundation for deeper investigation. Students may elect to take one or more of the 400-level sequence on Middle Eastern history, or other specialized courses, upon completion of the course. The first half of the course focuses on the foundations of Islamic government and civilization, the first Islamic empires, and the Ottoman empire. The second half of the course traces the modern history of the Middle East and examines how it has been profoundly shaped by European imperialism and American political, economic, and strategic interests. Students will be evaluated on regular quizzes and essay exams and participate in class discussions of assigned readings and current events. HIST 181 / JST 181 satisfies general credit requirements for the history major or minor, including the "non-western" component of the major. The course may also be used to fulfill requirements for the Middle East Studies minor. Non-majors may use this course to satisfy a general education humanities selection. HIST 181 / JST 181 will be offered once a year with 50-60 seats per offering.

Cross-Listed Courses: JST 181

Changes Effective Spring 2020:
- Description

HIST 186: The Silk Roads (3 Credits: Maximum of 3 Credits) (IL)
Old Listing Effective Through Fall 2019:
Conquest of the New World, development of colonial institutions, impact on native cultures, and origins of independence movements. HIST 178 Latin-American History to 1820 (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. The "Colonial Latin America" class is a survey of three centuries, from the initial encounter on New World soil of Iberian, African, and native cultures and races, to the birth of independent culturally- and racially-mixed nations. Our emphasis is on the patterns of conquest and cultural encounter, the processes of colonial rule, the nature of interaction between social groups, and on the cultural impact of the colonial experience upon all colonial Latin America's peoples. We study the institutions, cultures, attitudes, and fortunes of Spaniards and Portuguese; African slaves and free blacks; Nahuas and Aztecs, Mayas, and Incas. We discover the roles played in colonial society by a wide variety of peoples, from an African slave on a Brazilian sugar plantation to a Spanish high society woman in Lima to the black and native workers in an Ecuadorian tannery to an Aztec nobleman in Mexico City. The people who lived in colonial Latin America are given a chance to speak for themselves as much as possible; most of the assigned books feature contemporary documents translated from Spanish, Portuguese, and various native languages. Students are evaluated on two sets of essay exams and write a paper, as well as participation in classroom discussion. History 178 is offered most years with 90 seats per offering and is a prequel (but not a prerequisite) to History 179, the "Modern Latin America" class often taught the semester following; both classes are required for the Latin American Studies major, as well as meeting various History major requirements.

Changes Effective Spring 2020:
- Description
- Title
- Add IL Designation
A survey of the Silk Roads and maritime routes connecting premodem Europe and Asia, and the cultures that flourished along them. What do medieval Buddhist pilgrims, Mongol warriors, Marco Polo, and nineteenth-century British secret agents all have in common? What were the “information highways” that connected people and cultures across the premodem world? Taking crosscultural communication and connectivity as its central themes, this course explores the central role that the Silk Roads and Indian Ocean maritime routes have played throughout Eurasian history. It provides a historical survey of the land and sea trade networks connecting Europe and Asia, and the cultures that have flourished along them. The course explores connections between China, Rome, Byzantium, Persia, the Mongol Empire, Southeast Asia, and Central Asia. It covers exchanges of art, religion, cultural, technological, and economic goods. It also includes discussion of ethnic conflict and cultural identity in Central Asia, the importance of global trade routes in shaping the modern world, and the representation of the Silk Roads in contemporary popular culture. The focus of the course is to provide students with an appreciation of the interconnectedness of the premodem world, as well as the vital role of the trade system in the development of the major civilizations of Eurasia.

Changes Effective Spring 2020:
- Description
- Add GH Designation
- Add BA Humanities Designation
- Add BA Other Cultures Designation
- Make Not Repeatable
- Add Cross-Listing ASIA 186

HIST 191: Early African History (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Explores important economic and cultural transformations in the making of early African empires from 1 MBC to 1750. HIST 191 / AFR 191 Early African History (3) (GH, IL, BA) This course meets the Bachelor of Arts degree requirements. The course is an introduction to the history of Africa south of the Sahara from the origins of humankind to roughly 1750. Since it is not possible to undertake a systematic survey of the period — the continent is too vast and our data too sparse — we will focus on a number of common themes in the cultural and historical development of African societies. We will start with an introduction to African cultures and the problems in studying them, move on to examine the evidence for the early origins of humans on the African continent, the agricultural revolution, and ancient African kingdoms, empires and civilizations (including Egypt). We will then explore three interrelated themes in the history of Africa from the 16th-18th centuries: trade, state formation, and the spread of Islam. Finally, we will turn to an examination of the slave trade and its impact on Africa and the Americas. This is also a course in historical reconstruction and analysis. There are few documentary sources for this period and much of the data we have is fragmentary. The resulting history consists largely of long-term social changes rather than detailed narrative. We must thus learn to reconstruct history from what evidence is available, using general principles of African social, economic, and political organization that we will develop in class. Typically, students will be evaluated on the basis of a map quiz, short papers, exams that have both an identification and essay component, and participation in class discussions and debates. HIST 191 / AFR 191 provides an excellent foundation for both AFR 192 / HIST 192 (Modern African History) and HIST 479 (Imperialism and Nationalism in Africa). In addition to satisfying the GI requirement, AFR 192 / HIST 192 satisfies general credit requirements for the history major or minor, including the “non-western” component of the major. Non-majors may use this course to satisfy a general education humanities selection. The course also may be used to fulfill requirements for the African and African-American Studies major and the African Studies minor.

Cross-Listed Courses: AFR 191

Changes Effective Spring 2020:
- Description

HIST 192: Modern African History (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Impact of the slave trade, expansion of Islam, colonial conquest, social and cultural transformations, resistance, nationalism, and independence.

Cross-Listed Courses: AFR 192

Changes Effective Spring 2020:
- Description

HIST 193: Modern Iran (3 Credits)
Old Listing Effective Through Fall 2019:

Ever since the beginning of the twentieth century, Iran has been in a constant state of revolution. Social, political, and economic factors generated numerous movements and cultural adjustments that strove to find a better mechanism by which to run the country. The Constitutional Revolution laid the foundations for a new political discourse of rights and duties, of representation, and sovereignty. Later, the abolition of the Qajar dynasty and the establishment of the Pahlavi state endeavored to create a new society that would fly the flag of modernity through an imagined linkage to ancient Persian traditions. Policies and reforms of that era helped create a middle class, and served as a pretext to many of philosophical, ideological, and political debates about the nature of Iranian nationalism and the Iranian people, and the nation’s destiny in the world. And finally, the 1979 Revolution that aimed to create yet another “new” society but encountered difficulties to do so. The closure of this century was with the appearance of the reform movement that tried to revolutionize the country from within the apparatus of the Islamic Republic. This course will trace the social, political, and economic trends of Iranian history, through an examination of different schools of historiography, critical reading of scholarship and sources, and film analysis.

Cross-Listed Courses: JST 193

Changes Effective Spring 2020:
- Description
- Add GH Designation
- Add IL Designation
- Add BA Humanities and Other Cultures Designations

HM 290W: Hospitality managerial Communication (3 Credits) (WF)
Old Listing Effective Through Fall 2019:

Provides the foundational skills for professional written and oral communication for managers in the hospitality industry.

Changes Effective Spring 2020:
HM 306: Hospitality in Senior Living (3 Credits)
Old Listing Effective Through Fall 2019:

Introduction to senior living and continuing care retirement communities and related hospitality management career opportunities. HM 306 Hospitality in Senior Living (3) This course introduces students to continuing care retirement communities (CCRC’s) and senior living facilities. The course is taught from a hospitality perspective and focuses on how the application of hospitality management can enhance senior communities and their residents. The multidisciplinary content includes a variety of perspectives on designing and delivering services for seniors, including long-term care administration, geriatric nursing, adulthood and aging, therapeutic recreation, and nutrition and foodservice.

Prerequisite: HM 201

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses
• Title
• Abbreviated Title

HM 311: Wine Appreciation (2 Credits)
Old Listing Effective Through Fall 2019:

A study of identification of varieties of wine, methods and techniques of viniculture, development of wine lists and wine marketing.

Prerequisites: Students must be 21 years of age or older to register for this course.

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

HM 329: Introduction to Food Production and Service (3 Credits)
Old Listing Effective Through Fall 2019:

Principles of quality food production and service stressing the integration of menu planning, recipes, cost control, and service. HM 329 Introduction to Food Production and Service (3) This course provides students with information on the basic principles of effective food production and service management. The primary focus is the integration of menu planning, recipe writing, including HACCP, and the development and maintenance of quality standards and cost control for both food and labor throughout the foodservice cycle. Students will also be introduced to managing service in the front of the house for foodservice operations. The course is required of HM majors, and is part of the foods sequence, providing knowledge prerequisite for HM 330 and HM 430 in which student prepare and serve food for the public. This course also covers foodservice management competencies required for Nutrition students desiring to obtain a dietetic internship and the RD credential through ADA. Students must complete this course with a C or better before proceeding to the food production classes.

Prerequisite or concurrent: HM 228

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

HM 335: Hospitality Financial Accounting (3 Credits)
Old Listing Effective Through Fall 2019:

This course provides students with a basic knowledge of financial accounting principles and techniques. The course emphasizes what accounting information is, why it is important, and how it is used in the hospitality industry. Accounting is the information system that measures business activities, processes that information into reports, and communicates the results to decision makers. The students are exposed to all the important elements described above: the measurement system, processing of the information and the communication. The emphasis in this course is on the use of financial information from the user’s perspective. Unless the user is aware of the process that generates the results of the accounting process, the user cannot make informed decisions. The students first learn the structure of the double-entry system of accounting and then they learn how to use the information to make informed financial decisions.

Prerequisites: A grade of C or better required for ACCTG 211. Prerequisite or concurrent: HM 201

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

HM 336: Hospitality Managerial Accounting (3 Credits)
Old Listing Effective Through Fall 2019:

Collection, processing, and interpretation of accounting data for managerial planning, control, and evaluation in hospitality organizations. HM 336 Hospitality Managerial Accounting (3) Managerial decision-making using accounting data is an integral part of the function of managers in the hospitality industry. The accounting function of the lodging business generates financial data, and managers need to be able to interpret the data, analyze it and make decisions based on their interpretation and analysis of the data. This course provides the student with the core knowledge needed to understand the kinds of data generated by the financial systems of hospitality operations, prepare budgets, perform variance analysis, and provide control over the financial aspects of the hospitality business. Main topics typically include:• Introduction to managerial decision-making in the hospitality industry• Cost behavior analysis in the hospitality industry• Cost, volume and profit analysis in the hospitality industry• Pricing decisions in the hospitality industry• Preparation of operational budgets in the hospitality industry• Calculation and interpretation of cost and revenue variances in the hospitality industry• Preparation of cash budgets and control over cash in hospitality operations• Preparation of the statement of cash flows in the hospitality industry• Preparation of proforma financial statements in the hospitality industry The content of this course is considered fundamental for anyone in hospitality management and, therefore, is required of all Hospitality Management majors. Prior to this course, students are required to have taken Financial Accounting in the Hospitality Industry. HM 336 is a pre-requisite to Financial Management in Hospitality Operations.
Prerequisites: a grade of "C" or better in HM 335 or ACCT 211, and a grade of "C" or better in HM 271M

Changes Effective Spring 2020:

- Description
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses

HM 380: Hotel Management (3 Credits)
Old Listing Effective Through Fall 2019:

Introduction to rooms management including front office, housekeeping, security, and engineering. Emphasizes operations, coordination, and communication within and between departments. HM 380 Hotel Management (3) HM 380 includes an active-learning component that requires students to be in the on-campus hotels for 48 hours during the semester. This experience will allow the students the opportunity to observe the basic functions of the Rooms Division departments of a hotel. In the Front Office department, students will observe the front desk and reservation clerks. In the Housekeeping department, students will observe the room attendants, public area attendants and laundry workers. In Maintenance, students will observe maintenance employees and be introduced to Safety and Security concepts. The course will include a 2-hour per week lecture that focuses on Rooms Division departments but also briefly discuss other operating departments within a hotel. Students will also complete other assignments that encourage them to consider them how hotel departments operate and work together. Students will keep a daily journal of their work rotation experiences and observations, and will also be asked to answer several questions about how the departmental operations, interdepartmental communication, and other topics.

Prerequisites: A grade of "C" or better in HM 201, HM 271

Changes Effective Spring 2020:

- Description
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses

HM 390: Corporate Social Responsibility in Hospitality (3 Credits)
Old Listing Effective Through Fall 2019:

This course introduces students to issues of corporate social responsibility (CSR). The course is taught from hospitality perspective with following foci. Specifically, this course addresses the general historical development of CSR in details along with hospitality cases, fundamental concepts of CSR, different arguments for CSR, major frameworks of CSR, sustainability (environmental) issues, and hospitality cases and applications. The course will provide an opportunity to students to analyze CSR programs of major hospitality companies by applying the concepts and practices of CSR discussed in the course. Throughout the course, students will learn the significance of CSR initiatives, not only for the society, but also for the business. The course will discuss how a hospitality company’s CSR initiatives can be strategic so that they will improve brand image, reputation, and relationships with customers, employees and governments, which will result in improved performance for the company.

Prerequisites: HM 201

Changes Effective Spring 2020:

- Description
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses

HM 407: The Sustainable Fork: Food Systems Decisions for Away-From-Home Eating (3 Credits)
Old Listing Effective Through Fall 2019:

The course will incorporate economic and managerial dimensions to the discussion of food decisions in foodservice away-from-home eating contexts, particularly emphasizing the behavioral aspect of decisions - how individuals (consumers, providers, managers) make choices in the food system, and what might be the consequences of these choices. The course will use evidence from multiple farm-to-fork perspectives to allow students to analyze food systems problems and solutions. It will also require students to engage directly with the local food service system through course projects and tours. The major topics of discussion will be organized under each of the value chain components of the farm-to-fork continuum: production, distribution, purchasing, preparation, and consumption. Specific topics under each of these value chain components will include: nutrition, food safety, food waste, sustainable practices, social justice, consumer utility, economic profits, ethics, government policy, and decision-making. In particular, the course will be motivated by economic theories such as: agency relationship, information asymmetry, transaction cost economics, and behavioral economics topics such as self-rationing, and time discounting.

Cross-Listed Courses: FDSYS 407
Prerequisite: AGBM 170

Changes Effective Spring 2020:

- Description
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses

HM 435: Financial Management in Hospitality Operations (3 Credits)
Old Listing Effective Through Fall 2019:

Fiscal techniques in the development, management, and control of hospitality establishments.

Prerequisites: A grade of "C" or better required in ECON 102 or ECON 014 and HM 336. Prerequisite or concurrent: HM 350

Changes Effective Spring 2020:

- Description
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses

HM 442: Hospitality Marketing (3 Credits)
Old Listing Effective Through Fall 2019:

Marketing management in the hospitality industry, including analyzing the market through market research and developing a marketing plan.

Prerequisites: A grade of "C" or better required in HM 201, MKTG 221M

Changes Effective Spring 2020:

- Description
- Abbreviated Title
- Prerequisite/Corequisite/Concurrent Courses
HM 482: Hospitality Real Estate (3 Credits)
Old Listing Effective Through Fall 2019:

The course focuses on commercial real estate concepts related to the hospitality industry.

Prerequisites: A grade of "C" or better required in HM 336, HM 380

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

HM 483: Revenue Management (3 Credits)
Old Listing Effective Through Fall 2019:

Students learn how to effectively implement revenue management strategies and techniques in the hospitality industry.

Prerequisite: a grade of C or better in HM 350

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

HM 484: Hospitality Entrepreneurship (3 Credits)
Old Listing Effective Through Fall 2019:

The course focuses on successfully launching new business ventures in the hospitality industry. HM 484 Hospitality Entrepreneurship (3) The purpose of this course is to commence the learning process regarding Entrepreneurship in the Hospitality Industry. The course provides the student with a solid foundation of how an idea is generated and taken to market for implementation. The students will examine the characteristics of the entrepreneur and the process followed from generating an idea, to building a business model, preparing a competitive analysis, completing a feasibility study, reviewing intellectual property, developing a business plan, seeking funding and presenting their idea to potential investors. Topics include idea recognition, feasibility studies, business plans, developing a business model, intellectual property, marketing, financing, organizational growth, and franchising. The course is oriented to the student who would like to own a business.

Prerequisite: a grade of "C" or better in HM 336, MKTG 221

Changes Effective Spring 2020:

• Description
• Title
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

HM 488: Hospitality Asset Management (3 Credits)
Old Listing Effective Through Fall 2019:

Recommended Preparations: concurrent course HM 336 has prerequisites of A grade of "C" or better in HM 271, HM 335 This course introduces students to asset management in global hospitality operations. The course is taught from a hospitality perspective and focuses on how asset managers usually work with hospitality asset owners and third party providers to enhance and optimize the value of hospitality assets. The multidisciplinary content includes a variety of perspectives on asset managers helping owners and third party operators make investment decisions, enhance asset value, review and assess contractual agreements, and be aware of ongoing global and local trends that could eventually affect the value of hospitality assets such as hotels and restaurants.

Concurrent: HM 336

Changes Effective Spring 2020:

• Description
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

HORT 101: Horticultural Science (3 Credits) (BA) (GN)
Old Listing Effective Through Fall 2019:

Introduction to horticulture with emphasis on plant domestication, morphology, classification, world food crops, commodities, gardens, propagation, and agrochemicals. HORT 101 Horticultural Science (3) (GN) (BA) This course meets the Bachelor of Arts degree requirements. The course content of Horticulture 101, as indicated in the complete course outline, deals with the fundamental concepts and specialty areas, which contribute not only to the science and technology involved in horticulture but also to the art. It provides an overview of the role of various specialties of the natural sciences (e.g. plant morphology, physiology, taxonomy, genetics and nutrition, pest management, management and production of crops, landscaping and technology) relevant to a range of plant uses from medicinals and food production to the aesthetic benefits derived from plants. The course begins with the origin and domestication of plants followed by: A. An Overview of horticulture which includes an explanation of the horticulture industry, how to achieve success in horticulture and the relationship between horticulture and the environment; B. Science in horticulture which includes the classification of plants, plant propagation, plant nutrition, environmental factors affecting plant growth and development, plant growth regulators, post harvest physiology and pest management; C. Management and production of horticultural crops which include nursery, floral, turfgrass, vegetable, fruit and nuts; D. Landscaping including designing landscapes, xeroscapes and sitescapes, establishing and maintaining landscapes; and E. Concluding with Technology in horticulture. The course content additionally includes major areas of knowledge based on the fundamentals, universal concepts and achievements in the cluster of scientific disciplines comprising horticulture and provides students with the opportunity to appreciate that the origins, domestication and production of cultivated plants are the essence of human existence.

Changes Effective Spring 2020:

• Description
• Abbreviated Title
• Make Repeatable

INART 50: The Science of Music (3 Credits) (BA) (GN)
Old Listing Effective Through Fall 2019:

Waves, physics of sound, hearing, musical scales, musical instruments, and room acoustics. INART 050 The Science of Music (3) (GN)(BA) This course meets the Bachelor of Arts degree requirements. This course will explore the physical and acoustical bases of sound and music. The physics will include a study of vibrating systems and simple harmonic motion, wave propagation, reflection and refraction, superposition, resonant frequencies, harmonics, phase, the relationship of speed and velocity, and spectra. The acoustics portion will apply these physical properties to hearing, sound and music, covering the nature of the
human auditory system, and correlations of pitch to frequency, loudness to amplitude/power/intensity, timbre to spectra and envelope. NOTE: there need be no specific math prerequisite for the course. Though high school algebra and trigonometry will be recommended, these topics will be integrated with the rest of the course material. With physical and physiological groundwork laid, the subject matter will move to purely musical areas: the construction of musical scales, the nature of consonance, dissonance, and harmony. Twelve-tone equal temperament, the basis of Western common practice music, is not an absolute, but a decision made to facilitate certain musical choices, and a compromise in terms of optimal consonance. The nature of the different instruments will then be discussed -strings, winds, brass, and voice. Different instruments naturally produce different scale types and different types of spectra. Students will learn to appreciate the inherent differences in different instrument types. The last portion of the course will return to acoustics, exploring the role that performance spaces play in the propagation and reception of sound. The shape and materials of a room determine its characteristic sound. Students will learn about how sound in large auditoriums is characterized by the balance of direct and reflected sound, the distinction between specular and diffuse reflections, the absorptive properties of different building materials, and the nature of reverberation. Smaller performance spaces are subject to standing waves, flutter echo, and comb filtering. Taking steps to avoid undesirable characteristics is often an easy matter once the nature of these characteristics is understood. Finally, an overview of perceptual psychological studies of auditory streaming will explore how the auditory system organizes sound on a primitive, unlearned level. Grading will be based on weekly homework assignments, two midterm exams and a final exam.

Changes Effective Spring 2020:

• Description

INART 258A: Fundamentals of Digital Audio (3 Credits) (GA)
Old Listing Effective Through Fall 2019:

A thorough introduction to digital music production technologies, covering fundamentals of how digital musical information is stored, processed and transmitted. INART 258A Fundamentals of Digital Audio (3) (GA)(BA) This course meets the Bachelor of Arts degree requirements. A thorough introduction to digital music production technologies, covering the fundamentals of how musical information is stored and transmitted in digital devices. This course is meant for people who are passionate about working with sound, and who are willing to take on new technical and creative challenges in audio production. It is the pre-requisite for more many advanced courses in music technology and audio production. Students complete a series of low-stakes audio exercises on fundamental operations, a series of written responses to questions on the underlying theory of digital audio, and a small number of extended creative projects. The software used is at the level of professional audio production workstations. Students complete the course with a set of vocational skills in computer music and audio.

Prerequisites: MUSIC008 or concurrent enrollment in either MUSIC131 or MUSIC132

Changes Effective Spring 2020:

• Description

• Add BA Arts Designation

INART 258B: Fundamentals of Digital Audio (1 Credit) (BA) (GA)
Old Listing Effective Through Fall 2019:

A general overview of music technologies current to music educators and performers. INART 258B Fundamentals of Digital Audio (1) (GA) (BA) This course meets the Bachelor of Arts degree requirements. A general overview of music technologies current to music educators and performers, as defined by their accrediting organization. This course is meant for students who do not intend to pursue further studies in music technology. Students will be exposed to software that is meant for non-specialists, and learn basics of music recording and editing. Students complete a set of lessons, each of which features a hands-on exercise. They gain a set of technical tools that should be of immediate relevance to their careers, including basics of music recording, audio editing, Internet resources, music arranging and score preparation. This course has a significant active learning component, as all assignments are hands-on creative projects. It qualifies as a General Education Arts (GA) and a BA course.

Concurrent: concurrent enrolment in either MUSIC131 or MUSIC132

Changes Effective Spring 2020:

• Description

IST 222: Community Informatics (3 Credits)
Old Listing Effective Through Fall 2019:

This course combines theory and practice to help students develop a contextualized understanding of community as a conceptual lens for understanding human history and human experience. This course examines the history of community, and of interactions between community and information technology, emphasizing how possibilities and practices of community have been transformed by information technology through the last half century, and currently. The course includes opportunities for students to engage with, and thereby come to understand and appreciate local community institutions off campus. Thus, in the tradition of the Chicago School of Sociology, the course directly utilizes the local community itself as a living laboratory for the study of community informatics. The objective of the course is to help students think critically about community and technology in society, and more specifically, about the how information technology can be used to shape human participation in and experience of community

Changes Effective Spring 2020:

• Add Honors Designation

• Add GS Designation

IST 234: Digital Cultures (3 Credits) (GS)
Old Listing Effective Through Fall 2019:

Introduction to the rapidly changing world of digital cultures, and the communicative, and social impacts on individuals and institutions.

Changes Effective Spring 2020:

• Description

• Change Number to 234N

• Change Cross-List Number to COMM 234N

• Add GH Designation

• Add Inter-Domain Designation

IST 256: Programming for the Web (3 Credits)
Old Listing Effective Through Fall 2019:
Changes Effective Spring 2020:

Prerequisite: IT 003 or IT 020

Changes Effective Spring 2020:

Prerequisite/Corequisite/Concurrent Courses

JAPNS 120W: Japanese Literature in its Cultural Context (3 Credits) (WF) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Japanese Literature in its Cultural Context: Japanese literature and culture from Classical through contemporary times; writing intensive.

Changes Effective Spring 2020:

JST 135: Ethics in Jewish Tradition and Thought (3 Credits) (IL) (GH)
Old Listing Effective Through Fall 2019:

Examination of Jewish ethical thought from biblical foundations to the modern period, with attention to contemporary issues in moral philosophy. J ST (PHIL/RL ST) 135 Ethics in Jewish Tradition and Thought (3) (GH;IL) This course takes as its starting point the idea that modern ethical frameworks are deeply rooted in the “soil” of older traditions. By examining the development of Jewish intellectual traditions and their roots in the Bible, it provides students with an opportunity to study ethics in a philosophically textured, culturally rich, and historically informed way. And by focusing on Jewish engagement with the Bible, the course illuminates other traditions that derive from biblical monotheism: for example, those associated with Christianity, Islam, and the Enlightenment. The first part of the course takes up the idea of tradition and includes a study of biblical texts that serve as the foundation for key moral concepts. Following the traditional division of the scriptures, it examines questions of human identity and responsibility in the Torah, social ethics in the Prophets, and the quest for wisdom in the Writings. The final topic in this unit is the development of ethical tradition among the great sages of Jewish antiquity. The second unit shifts focus to the appropriation of tradition in modern Jewish thought. After reviewing important developments in Jewish thought in the medieval and early modern periods, it turns attention to the ways that some recent figures have addressed perennial concerns in light of commitments and ways of being that are integral to Jewish identity. By reading closely the works of such seminal thinkers as James Kugel, Joseph Soloveitchik, and Abraham Heschel, we will gain a deep acquaintance not only with important vocabulary but also with the ways that traditional words and concepts may be used dynamically to produce fresh ways of looking at questions in moral philosophy. Even when the influence of Judaism on a particular figure is not openly acknowledged in his work, as in the case of Sigmund Freud, he may be studied profitably, in a way that sheds light on characteristically Jewish ideas. Finally, the course turns in its third and final unit to applied ethics. The central question here is how Jewish tradition informs ethical reflection in a wide range of contemporary fields: specifically, environmental studies, social and sexual ethics, and legal and business ethics.

Cross-Listed Courses: PHIL 135 RLST 135

Changes Effective Spring 2020:

- Description
- Add BA Humanities Designation
KEYBD 100: Piano: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in piano one-half hour per week. KEYBD 100J Piano: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Keyboard 100J is designed to provide the intermediate non-music major and/or music major student with strategies for developing some of the advanced skills required for playing the piano. Some knowledge of music or piano is assumed. Admission to the course is controlled by the piano faculty. Music 050, 051 (for non-music majors), completion of the piano proficiency (for music majors), or permission of the instructor is a prerequisite for this course. Students learn repertoire, sight-playing, score analysis, interpretive techniques, how to practice to the fullest possible communication of the composer’s intent, scales, and a proper and healthy physical approach to the keyboard. Practice of these elements outside the class is expected. Objectives include score analysis, learn repertoire, expressive interpretation of great masterworks of the piano. Evaluation is based on accuracy of music learning, improvement in technique and expressiveness, possible listing assignments, attendance at studio class and specific concerts. Special facilities required to teach the course are two well-maintained grand pianos for student performance and teacher demonstration. The course is offered every semester.

Changes Effective Spring 2020:
- Description

KINES 6: Cycling (1.5 Credits)
Old Listing Effective Through Fall 2019:

A course designed to give students an understanding of and the ability to establish an exercise program involving riding. KINES 006 Cycling (1.5) (GHA) Kinesiology 006 introduces students to the performance of cycling as a lifelong activity that helps maintain and enhance physical fitness and overall wellness. This course provides the information that the student needs to understand, organize, plan and implement a physical fitness program that features cycling as a primary activity. The centerpiece of this course is a progression of individually-paced rides of varying lengths that are conducted over various terrains. Past activities have included individual time trials, 5 through 25 mile road and trail rides, interval rides, hill rides, and rides to various locations of interest including, Beaver Stadium, the deer research pens, Sunset Park, and various other landmarks around campus and in the community. These activities are complemented by a series of lectures on such topics as the physiology of exercise, cycling safety; goal-setting for personal health; principles and concepts of physical fitness; training methods to address different cycling goals; and nutrition and weight control. Students also participate in team-based projects such as group-designed scavenger hunts and "landmark rides." As a final project, each student is asked to define a measurable fitness goal and design a fitness cycling program to realize that goal. As part of this assignment, students assemble data to indicate that they have achieved their goal, and then identify and analyze the factors that contributed to their success. Students also have the opportunity to monitor their performance throughout the course using a variety of personal assessment inventories and instruments, such as logs and heart rate monitors. When a student completes Kinesiology 006, he or she will be able to identify the components of an effective physical fitness program and explain how cycling contributes to the success of this program; develop realistic fitness goals and design a cycling program to meet these goals; perform a variety of fitness cycling techniques; and understand how cycling promotes psychological well-being. Various evaluation techniques will be used to assess individual progress in Kinesiology 006. These techniques will include (but are not limited to) conventional objective testing, performance on an individual time trial cycling test, personal assessment inventories and assignments, and journaling assignments. There are no special facilities for this course. The Department plans to offer two to four sections each fall and spring semesters with an enrollment of 30 in each section.

Changes Effective Spring 2020:
- Description
- Title
- Abbreviated Title
- Credits from 1.5 to 1.5-3

KINES 25: Introduction to Court Sports (1.5 Credits) (GHA)
Old Listing Effective Through Fall 2019:

A course designed to introduce students to various court sports such as tennis, racquetball, handball, squash, and/or badminton. KINES 025 Introduction to Court Sports (1.5) (GHA) Kinesiology 025 is a course that has been designed to give the Penn State student an introduction to selected lifetime court sports such as but not limited to tennis, racquetball, squash, table tennis, badminton, handball, and platform tennis. Kinesiology 025 is taught in a modular (two or three for a given semester) format with two to three court sports being chosen for the course content for the semester. Students will know which court sports have been selected by listings in the semester Directory of Classes. The fundamental skills, strategies, etiquette, and rules will be covered for each court sport selected. Successful completion of this court sports course serves as a "gateway" to advanced level courses in court sports, intramural and recreational play and provide the skills and knowledge necessary to participate in a lifetime activity. In Kinesiology 025 information gathering is done in an applied environment and usually in the context of solving complex movement problems. Information is gathered, solutions formulated and performances delivered and analyzed as different practice and game techniques are employed, different strategies are suggested and as different movement approaches are tested. The students in Kinesiology 025 will work collaboratively with fellow students and peer tutors in their efforts to master court skills which will serve as a gateway to life-long participation in these activities. The holistic approach to teaching activity classes employed in Kinesiology classes requires that students understand and appreciate the cultural traditions and values which are embedded in these movement forms. Students will be evaluated by a combination of (but not limited to) evaluation techniques. Examples of those techniques are written examinations, skills testing, tournament performance, and subjective evaluation of skill level and game performance.

Changes Effective Spring 2020:
- Description
- Abbreviated Title

KINES 46: Squash I (1-1.5 Credits: Maximum of 1.5 Credits) (GHA)
Old Listing Effective Through Fall 2019:

A course designed to give students an appreciation of and proficiency in the skills, rules, and regulations of squash. KINES 046 Squash I (1-1.5) (GHA) Kinesiology 046 is a course designed to provide students with the motor skills and cognitive understanding necessary to successfully compete in the game of squash. Initial emphasis will center around three areas: 1) developing racquet skills and mechanics; 2) acquiring
an understanding of the rules and regulations of the game; and, 3) developing appropriate movement skills. Subsequent effort will focus on applying the above to live-game situations. Here, students will learn to recognize, comprehend, and develop on-court strategies, and will learn to employ these tactics in game play. Students will emerge from this course with beginning-level squash skills and a solid foundation in racquet fundamentals. This will serve as a "connector" to, not only advanced levels of squash, but other forms of racquet play as well. In turn, this will facilitate the discovery and appreciation of the significant lifetime benefits offered by all racquet sports. Students will be evaluated by (but not limited to) a combination of techniques: written examinations, skills testing, performance standards, and subjective evaluation of skill level.

Changes Effective Spring 2020:
- Description
- Make Not Repeatable

KINES 67: Physical Conditioning (1.5 Credits) (GHA)
Old Listing Effective Through Fall 2019:
A course designed to give students an experience with an understanding of vigorous physical training. KINES 067 Physical Conditioning (1.5) (GHA) Kinesiology 067 has been designed to help students build high levels of overall physical conditioning based upon athletic endeavors such as multi-sport and adventure challenges. Students should expect to physically challenge themselves through a variety of activities focusing on aerobic, anaerobic, and resistance training. Additionally, students will have an opportunity to learn skills necessary to create safe, complete conditioning programs while considering safety and injury prevention. Physical Conditioning will provide a unique balance of training guidelines that can be applied to the various activities one pursues throughout life. Kinesiology 067 serves as a stepping-stone to lifetime fitness, competition in organized athletic events, and personal challenge activities. Students will develop a holistic approach to training for endurance, strength, and integrated activities. Self-paced activity will allow for each individual to maximize the benefits of physical conditioning. Through working in groups to complete athletic challenges, students in Kinesiology 067 will integrate exercise, teamwork, and problem-solving skills. Success in group activities will hinge on communication between teammates and the team's ability to work in a cohesive fashion while experiencing a movement-based activity. Students may need to rely on group members for strengths in various areas. Various evaluation techniques will be used to assess progress in Physical Conditioning. These techniques will include, but are not limited to, written examinations, completion of special challenges integrating aerobic, anaerobic, and resistance training (i.e., obstacle course), and improvement-based evaluations of cardiovascular endurance and strength.

Changes Effective Spring 2020:
- Description
- Abbreviated Title

KINES 91D: Introduction to Team Sports/Outdoor-Ultimate Frisbee (1.5 Credits: Maximum of 99 Credits) (GHA)
Old Listing Effective Through Fall 2019:
A course designed to introduce students to the outdoor team sport of Ultimate Frisbee. KINES 091D Introduction to Team Sports / Outdoor – Ultimate Frisbee (1.5 per semester) (GHA) Kinesiology 091 is a course that has been designed to give the Penn State student an introduction to a selected outdoor team sport such as but not limited to Soccer, Ultimate Frisbee, Rugby and/or Speedball. The fundamental skills, strategies, and rules will be covered for the selected sport. Successful completion of the course will provide a foundation for participation in intramural activities, recreational activities and provide a gateway to life long movement. While Kinesiology 091 will focus on the skills, strategies and rules of a selected team sport the underlying sub-focus of this course is the development of the social skills required to be a good team member. The commitment to a team sport requires students to encounter a collaborative atmosphere. As the students seek to solve complex movement problems they learn to co-operate to achieve various team goals. The improvement of individual skills is important however the successful integration of these individual skills into the team is a valuable life lesson. As the student leaves the university the lessons learned in this class will prepare him/her for "team" membership in their various areas of professional practice. Students in Kinesiology 091 will be evaluated by a combination of evaluation techniques which may include but not be limited to written reports, skills testing, tournament performance and subject evaluation of "team" work ethics. Clean, safe, well-lit court space is necessary to properly deliver this course. It is anticipated that the department will offer at least two sections every fall and spring with an expected enrollment of 45 students per section.

Changes Effective Spring 2020:
- Description
- Title
- Abbreviated Title
- Make Not Repeatable

KINES 350: Exercise Physiology (3 Credits)
Old Listing Effective Through Fall 2019:
Structure and function of the human body as applied to health, wellness, exercise, and sports. KINES 350 Exercise Physiology (3) Exercise Physiology is a mid- to upper division course that will appeal to students with an interest in human biological adaptation. The course has two primary goals: First, students develop an understanding of the physiological adaptations that occur during and after endurance and resistance exercise. Second, students improve their comprehension of the differences between the acute exercise response and the changes that occur with chronic physical activity (exercise training). A major emphasis is placed on physiological systems as they relate to physical activity, exercise and health, and environmental stress; including, but not limited to, cardiovascular, respiratory, musculoskeletal, renal, neural, and metabolic. These systems are considered singly and in combination with regard to both exercise intensity and exercise duration. The depth of inquiry can range from molecular to organismal (whole-body). In addition, the mechanisms underlying the preventive and protective effects of exercise on human health and performance are discussed. The ability to apply concepts and principles of physiology to situations involving exercise, exercise training and decreased physical activity are highlighted, improving students' abilities to develop and differentiate between paradigms that utilize exercise to improve athletic performance and those that utilize physical activity to promote health. Special topics of applied study may include aging; development; gender; body composition; disease and environmental extremes such as heat, cold, diving and altitude. Students are required to demonstrate via assessment, knowledge and understanding of the acute physiological response to exercise and physiological adaptations to programs of chronic resistance and endurance exercise. Quantitative and analytical skills are emphasized, especially as they pertain to exercise testing and exercise program evaluation. The ability to interpret scientific data as
they pertain to exercise physiology is required. Background knowledge in biology, chemistry, physics, and exercise science represent the knowledge base from which the class is built and contributes to the mastery of concepts presented. This course is required for Athletic Training and Kinesiology majors.

Prerequisites: Students must have a C or better in: KINES 101; KINES 180, BIOL 141; ( BIOL 161, BIOL 163 ) AND ( CHEM 101; CHEM 106; CHEM 110; CHEM 130 )

Changes Effective Spring 2020:

• Prerequisite/Corequisite/Concurrent Courses

KEYBD 110: Piano: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in piano one hour per week. KEYBD 110J Piano: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Keyboard 110J is designed to provide the intermediate non-music major and/or music major student with strategies for developing some of the advanced skills required for playing the piano. Some knowledge of music or piano is assumed. Admission to the course is controlled by the piano faculty through interview and/or audition. Music 050, 051 (for non-music majors), completion of the piano proficiency (for music majors), or permission of the instructor is a prerequisite for this course. Students learn repertoire, sight-playing, score analysis, interpretive techniques, how to practice for the fullest possible communication of the composer’s intent, scales, a proper and healthy physical approach to the keyboard. Practice of these elements outside the class is expected. Objectives include learning score analysis and interpretive rendering of great masterworks of the piano. Evaluation is based on accuracy of music learning, improvement in technique and expressiveness, possible listening assignments, attendance at studio class and specific concerts. Special facilities required to teach the course are two well-maintained grand pianos for student performance and teacher demonstration. The course is offered every semester.

Changes Effective Spring 2020:

• Description

LDT 100: World Technologies and Learning (3 Credits) (IL) (GS)
Old Listing Effective Through Fall 2019:

This course explores e-learning in international contexts and the impact of these new learning options on cultures. LDT 100 World Technologies and Learning (3) (GS;IL) LDT 100 examines the sociocultural impacts of learning technologies of various sorts on world cultures. The course will examine several international cases of learning technologies, such as email, online learning, telecommunications, and wireless computing, as they are used for education and learning and implemented in several world cultures such as the US, UK, India, China, Africa, Europe, and Oceania. The primary objective of the course is to help students understand how learning technologies impact other cultures, and their own; how learning technologies bring dramatic change; and how these changes can be predicted, understood, and planned for. The course may offer an important introduction to the area of Learning, Design, and Technology, but it is otherwise not related to specific programs of study. It contributes to the General Education requirements for undergraduates.

Changes Effective Spring 2020:

• Description

LING 1: The Study of Language (3 Credits) (US) (IL) (BA) (GS)
Old Listing Effective Through Fall 2019:

A non-technical introduction to the study of human language, and its role in human interaction. Students who have successfully completed LING 100 may not enroll in LING 001. LING 001LING 001 The Study of Language (3) (GS;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. LING 001 examines the nature of human language and its links to human culture. A major focus of this course is on examining how languages are structured, how all languages are similar, how they differ, and how a language affects and is affected by the culture of its speakers and the sociopolitical context in which it is situated. The course begins by discussing the essential characteristics of every human language. It ends by examining the factors that have put languages at risk throughout history and what is causing them to become increasingly endangered. The course examines such issues as: speakers attitudes toward language through an examination of phenomena close to home, like African American Vernacular English and various regional accents, how shared Linguistic practices create unity (South Africa, The Americas, Asia), what role languages play in maintaining difference and, indeed signaling socio-political diversity (Serbian versus Croatian, Hebrew, Yiddish, Afrikaans, Taiwanese, The Linguistic Geography of Africa), and how language reflects human origins, migrations, and history.LING 001 is a core course for the minor in Linguistics and it may also be used for the General Education requirement in Social/Behavioral Science, for a B.A. Social/Behavioral Science requirement, for the General Education Intercultural/International Competence requirement. The course is offered two times a year. It meets three hours per week and the total enrollment each semester is limited to 75 students. Assessment is based on two examinations, five problem assignments that require short essays (around 2 pages), one problem assignment that requires a more extended
analytical essay (around 4-5 pages), and participation in class and group discussions.

Changes Effective Spring 2020:

- Description

LING 100: Foundations of Linguistics (3 Credits) (BA) (GS)
Old Listing Effective Through Fall 2019:

Systematic study of linguistic structures in a variety of the world’s languages; an overview of language, and its organization. LING 100 Foundations of Linguistics (3) (GS)(BA) This course meets the Bachelor of Arts degree requirements. Linguistics is, broadly, the scientific study of language. At the heart of linguistics is the search for the unconscious knowledge that humans have about language (s), an understanding of the structure of language, and knowledge about how languages differ from each other. Speakers of all languages know a great deal about their language, usually without knowing that they possess such knowledge. For example, a speaker of American English possesses knowledge about word order: s/he understands that “Sarah admires the teacher” is grammatical, while “Admires Sarah teacher” the is not, and also that “The teacher admires Sarah” means something entirely different. A speaker knows that when someone asks a “yes-no question”, s/he typically reverses the order of words at the beginning of the sentence and that the voice goes up at the end of the sentence, as, for example, in “Are you going?”. Speakers also possess knowledge about the sounds of their language, e.g. which consonants can go together in a word. For example, speakers know that “silt” could be an English word, while “sbint” or “srint” could not. In addition, speakers know the rules of language use, such as when to issue a command (“Get me a glass of water”) and when to ask a question (“Could I have a glass of water, please?”). Furthermore, they recognize dialects which are different from their own, and they can recognize earlier stages of their own language, as in a Shakespearian quotation, or a liturgical formula. This course equips students with the tools to investigate these aspects of language and language use. As a scientific discipline, linguistics employs strict methodologies to approach issues like the ones above. Students learn to transcribe speech phonetically, then to analyze the raw data into phonological statements about the sound system of languages. Likewise in word structure, students are equipped with the tools to segment words into their significant parts (called morphemes), which reveals interesting facts about how words are stored in memory. Through the study of syntax students learn about the unimaginable complexity of syntactic rules, and are taught the basics of how to unravel the mysteries of sentence structure. And when the whole complex of sounds, words and sentences is put together, rules of meaning are brought to bear, and the sentence is assigned a semantic reading. How this happens is discussed in the section on semantics. Linguistics 100 introduces these topics and provides enough information for students to understand the basics of the discipline.

Changes Effective Spring 2020:

- Description

LING 102: Introduction to Historical Linguistics (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

How languages change and evolve over time; language families; effects of borrowing and language contact. LING 102 Introduction to Historical Linguistics (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. Introduction to Historical Linguistics is designed to introduce the basic theories, methods, and data linguists used to study ancient languages and the connections between seemingly diverse peoples and cultures. The diversity of human language has been a topic of speculation since ancient times, popularly accounted for by similar stories and legends across cultures and religions. The course will survey these ideas and combine them with the major trends of philological thinking from antiquity to the present day. An important aspect of this course is in reviewing the philological record to examine the importance, and at times even sacredness, of the written word to various cultures. The course reviews in particular the works of the Greek, Latin and Sanskrit scholars, the anonymous Icelandic grammarian, and the influential work of the 19th century European philologists. It also examines how spoken language, in particular, leads us to an understanding of how different societies can be linked a common source for their language.

Prerequisite: LING 010 or LING 100

Changes Effective Spring 2020:

- Description
- Remove GH Designation
- Number to 405
- Prerequisite/Corequisite/Concurrent Courses

LLED 400: Teaching Reading in the Elementary School (3 Credits)
Old Listing Effective Through Fall 2019:

Introduction to the reading program; acquaintance with materials and techniques; observations of reading instruction; correlation with human growth and development. LLED 400 Teaching Reading in the Elementary School (3) LLED 400 is intended to help teacher candidates become knowledgeable users of theory and language about language, literacy and culture; and to think through instructional problems thoroughly, using multiple sources of information to experiment with alternative solutions. Dealing specifically with reading, we recognize that text goes beyond print texts to include multimodal visual, auditory, digital, movement, and artifactual texts. In LLED 400, candidates learn to understand how children develop as readers and users of literacies in and out of school. Candidates learn how to teach in ways that support children's successful development and uses of multiple kinds of literacy, including reading. Literacy teaching is both an intellectual and practical matter in which teachers work with students in ways that recognize the complexities of language and its social uses, learning and its cultural contexts, and schooling as organizational phenomena. Children enter schools with multiple types of literacy knowledge and cultural experiences. Coming to understand these complexities requires the coordination of both theoretical awareness and applied knowledge. Candidates' practice is developed as they learn to address the puzzles children present as they construct their knowledge of language, literacy, and literature in various social situations. Developing practical strategies to teach literacy requires a dedication of head, hand, and heart to treat all people with dignity, acknowledging the contributions of all cultural groups and respecting diversity as it honors ideals of social justice. In LLED 400, teacher candidates develop a repertoire of organizational, instructional, and evaluative strategies that are based on research and best professional practices. Candidates work on projects independently and in collaborative groups. Content is presented by the instructor through a combination of lectures, weekly readings and reflections on readings, class discussion, activities and demonstrations, and viewing and analyzing video. Projects include an analysis of children as readers and curriculum planning. LLED 400 is part of a block of courses in a PSU teacher education program that is unified by the basic set of
principles supporting the development of a broader and more inclusive understanding of texts, children, and communities.

Prerequisite: C I 295A or C I 295B ; EDTHP115 or EDTHP selection; Concurrent: LL ED401, LL ED402 for CEAED majors

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

LLED 401: Teaching Language Arts in Elementary School (3 Credits)
Old Listing Effective Through Fall 2019:

Principles, problems, materials, and techniques involved in teaching speaking, listening, writing, and reading in the elementary school. LLED 401 Teaching Language Arts in Elementary School (3) The purpose of LLED 401 is to acquaint teacher candidates with theories and practices of teaching writing. Candidates are immersed in the study and experience of workshop and strategic models of writing instruction. Basic goals of this course are to help candidates to use language well and thoughtfully concerning writing instruction, literacy, literature and culture; and to think through instructional problems thoroughly, using multiple sources of information to experiment with alternative solutions. We also expect candidates to understand the roles which culture plays in literacy practices, literature, identifications of "ability," and schooling; to learn how people function effectively in groups; and to develop a repertoire of organizational, instructional, and evaluative strategies. LLED 401 is part of a block of courses in a PSU teacher education program that is unified by the basic set of principles supporting the development of a broader and more inclusive understanding of texts, children, and communities.

Prerequisite: C I 295A or C I 295B ; EDTHP115 or EDTHP selection; Concurrent: LL ED400, LL ED402 for CEAED majors

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

LER 83: First-Year Seminar in Labor Studies and Employment Relations (3 Credits) (BA) (GS)
Old Listing Effective Through Fall 2019:

Critical approaches to the dimensions and direction in Labor and Employment Relations. LER 0835 First-Year Seminar in Labor Studies and Employment Relations (3) (GS;FYS)(BA) This course meets the Bachelor of Arts degree requirements. In addition to the academic topic and issues of this course, students can expect to gain a general introduction to the University as an academic community and have the opportunity to explore their responsibilities as members of the community. Students will develop an understanding of the learning tools and resources available to them, including the opportunity to develop relationships with faculty and other students who share their academic interests. Students will write essay exams, and critique a published study on the relevant topic of their own choices in teams. Class participation is required. The course will provide students with the opportunity to study Labor and Employment Relations in their first semester at the University. This experience will serve as a preparation for additional courses in Labor and Employment Relations as well as an introduction to college-level study generally. The course fulfills both a first-year seminar and a general education or Bachelor of Arts social/behavioral science requirement. Class periods

stress discussion of assigned readings, debates, and collaborative research projects.

Changes Effective Spring 2020:

• Description
• AbbreviatedTitle
• Number to 83S

LER 434: Collective Bargaining and Contract Administration (3 Credits) (BA)
Old Listing Effective Through Fall 2019:

Theory, practice, and economic impact of collective bargaining, including administration of the collective bargaining agreement. LER 434 LER 434 Collective Bargaining and Contract Administration (3)(BA) This course meets the Bachelor of Arts degree requirements. Upon completing the course, students should be able to identify and explain the concepts, principles and practical application of various types of negotiations between labor and management, understand the basic legal framework governing collective bargaining in the U.S. and the rights of the parties under the law, explain the typical processes of collective bargaining as practiced in industrial, service and public sectors in the U.S., prepare for negotiations/collective bargaining, and negotiate issues. The course will also help students to develop concrete negotiation skills and provide them with the opportunity to apply those skills, with the benefit of observation and feedback. Lastly, the course will introduce students to the contract administration process utilized by unions and employers. Students will become familiar with grievance procedures and arbitration processes and begin to develop basic skills in resolving disputes over the application and interpretation of labor agreements.

Prerequisites: LER 100

Changes Effective Spring 2020:

• Description
• Title
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

LLED 411: Teaching Language Arts In Secondary Schools I (3 Credits)
Old Listing Effective Through Fall 2019:

EXPLORATION OF LANGUAGE, LITERACY, AND CULTURE AND DEVELOPMENT OF CURRICULAR DESIGNS FOR TEACHING LANGUAGE ARTS IN SECONDARY SCHOOLS.

Prerequisite: ENGL 200 or 200-level literature course, ENGL 444; Concurrent: LL ED420

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

LLED 420: Adolescent Literature and Literacy (3 Credits)
Old Listing Effective Through Fall 2019:

Exploration of adolescent literacy and curricular designs for using the diversity of cultural voices in adolescent literature in secondary schools. Concurrent: LL ED411
Changes Effective Spring 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Title
- Abbreviated Title

MATH 17: Finite Mathematics (3 Credits) (BA) (GQ)

Old Listing Effective Through Fall 2019:

Introduction to logic, sets, probability.

Prerequisite: 2 units of high school mathematics

Changes Effective Spring 2020:

- Description
- Number to 37
- Prerequisite/Corequisite/Concurrent Courses

MATH 110: Techniques of Calculus I (4 Credits) (BA) (GQ)

Old Listing Effective Through Fall 2019:

Functions, graphs, derivatives, integrals, techniques of differentiation and integration, exponentials, improper integrals, applications. Students may take only one course for credit from MATH 110, 140, 140A, and 140B.

Prerequisites: MATH 22 MATH 40; MATH 41; or satisfactory performance on the mathematics placement examination

Changes Effective Spring 2020:

- Description

MATH 140: Calculus With Analytic Geometry I (4 Credits) (BA) (GQ)

Old Listing Effective Through Fall 2019:

Functions, limits; analytic geometry; derivatives; differentials, applications; integrals, applications. Students may only take one course for credit from MATH 110, 140, 140A, and 140B.

Prerequisite: Math 22 and Math 26 or Math 26 and satisfactory performance on the mathematics placement examination or Math 40 or Math 41 or satisfactory performance on the mathematics placement examination

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 140B: Calculus and Biology I (4 Credits) (BA) (GQ)

Old Listing Effective Through Fall 2019:

Functions, limits, analytic geometry; derivatives; differentials, applications from biology; integrals, applications from biology. Students may take only one course for credit from MATH 110, 140, 140A, and 140B.

Prerequisite: Math 22 and Math 26 or Math 26 and satisfactory performance on the mathematics placement examination or Math 40 or Math 41 or satisfactory performance on the mathematics placement examination

Changes Effective Spring 2020:

- Description

MATH 140E: Calculus with Engineering Applications I (4 Credits) (BA) (GQ)

Old Listing Effective Through Fall 2019:

Functions; limits; analytic geometry; derivatives; differentials, applications; integrals, applications. MATH 140E enriches the regular MATH 140 syllabus by adding weekly applied problems, a small number of laboratory sessions, and a major group project for which both written and oral presentation is required. It is a rigorous calculus course with additional motivation and applications in the engineering sciences. The core material is the same as MATH 140. MATH 140E provides an alternative to the regular MATH 140 for engineering majors. This course addresses the additional needs of engineering majors with regard to problem formulation and the interpretation of their mathematical solutions. The prerequisite for the course is MATH 022, 026; or MATH 040, 041; or satisfactory performance in the mathematics proficiency examination. Six sections of this course are offered every Fall semester. Course evaluation is based on quizzes, weekly applied problems, two midterms, a group project, and a final examination.

Prerequisite: Math 22 and Math 26 or Math 26 and satisfactory performance on the mathematics placement examination or Math 40 or Math 41 or satisfactory performance on the mathematics placement examination

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 140G: Calculus with Earth and Mineral Sciences Applications I (4 Credits) (BA) (GQ)

Old Listing Effective Through Fall 2019:

Functions, limits, analytic geometry; derivatives; differentials, applications from the earth and mineral sciences; integrals, applications from the earth and mineral sciences. Students may only take one course for credit from MATH 110, 140, 140A, 140B, and 140H.

Prerequisite: Math 22 and Math 26 or Math 26 and satisfactory performance on the mathematics placement examination or Math 40 or Math 41 or satisfactory performance on the mathematics placement examination

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 140H: Calculus With Earth and Mineral Sciences Applications II (4 Credits) (BA) (GQ)

Old Listing Effective Through Fall 2019:

Functions, limits, analytic geometry; derivatives; differentials, applications from the earth and mineral sciences; integrals, applications from the earth and mineral sciences. Students may only take one course for credit from MATH 110, 140, 140A, 140B, and 140H.

Prerequisite: Math 22 and Math 26 or Math 26 and satisfactory performance on the mathematics placement examination or Math 40 or Math 41 or satisfactory performance on the mathematics placement examination

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 140I: Calculus With Earth and Mineral Sciences Applications III (4 Credits) (BA) (GQ)

Old Listing Effective Through Fall 2019:

Functions, limits, analytic geometry; derivatives; differentials, applications from the earth and mineral sciences; integrals, applications from the earth and mineral sciences. Students may only take one course for credit from MATH 110, 140, 140A, 140B, and 140H.

Prerequisite: Math 22 and Math 26 or Math 26 and satisfactory performance on the mathematics placement examination or Math 40 or Math 41 or satisfactory performance on the mathematics placement examination

Changes Effective Spring 2020:

- Description
- Abbreviated Title
MATH 140H: Honors Calculus with Analytic Geometry I (4 Credits) (H) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Honors course in functions, limits; analytic geometry; derivatives, differentials, applications; integrals, applications. Students may only take one course for credit from MATH 110, 140, 140A, 140B, and 140H. MATH 140H Honors Calculus with Analytic Geometry I (4) (GQ)(BA) This course meets the Bachelor of Arts degree requirements. This course is the first in a sequence of three calculus courses designed for students in engineering, science, and related fields. Topics include limits of functions, continuity; the definition of the derivative, various rules for computer derivatives (such as the product rule, quotient rule, and chain rule), implicit differentiation, higher-order derivatives, solving related rate problems, and applications of differentiation such as curve sketching, optimization problems, and Newton’s method; the definition of the definite integral, computation of areas, the Fundamental Theorem of Calculus, integration by substitution, and various applications of integration such as computation of areas between two curves, volumes of solids, and work. The typical delivery format for the course is four 50-minute lectures per week, with typical assessment tools including examinations, quizzes, homework, and writing assignments. In contrast to the non-honors version of this course, the honors version is typically more theoretical and will often include more sophisticated problems. Moreover, certain topics are often discussed in more depth and are sometimes expanded to include applications which are not visited in the non-honors version of the course.

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 141: Calculus with Analytic Geometry II (4 Credits) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Derivatives, integrals, applications; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141, 141B, and 141H.

Prerequisite: MATH 140 or MATH 140A or MATH 140B or MATH 140E or MATH 140G or MATH 140H.

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 141B: Calculus and Biology II (4 Credits) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Derivatives, integrals, applications from biology; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141 and 141B.

Prerequisite: MATH 140 or MATH 140A or MATH 140B or MATH 140E or MATH 140G or MATH 140H.

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 141E: Calculus with Engineering Applications II (4 Credits) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Integration, applications; sequences and series; parametric equations, application. MATH 141E Calculus with Engineering Applications II (4) (GQ) MATH 141E enriches the regular MATH 141 syllabus by adding weekly applied problems, a small number of laboratory sessions, and a major group project for which both written and oral presentations are required. It is a rigorous calculus course with additional motivation and applications in the engineering sciences, designed to enhance the student’s problem solving skills and their understanding of how calculus is applied to real world problems. The core material is the same as MATH 141. MATH 141E provides an alternative to the regular MATH 141 for engineering majors. This course addresses the additional needs of engineering majors with regard to problem formulation and the interpretation of their mathematical solutions. The prerequisite of the course is MATH 140, 140A, 140B, or 140E; or the consent of the instructor. Six sections of this course are offered every Spring semester. Course evaluation is based on quizzes, weekly applied problems, two midterms, a group project, and a final examination.

Prerequisite: MATH 140 or MATH 140A or MATH 140B or MATH 140E or MATH 140G or MATH 140H.

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 141G: Calculus with Earth and Mineral Sciences Applications II (4 Credits) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Derivatives, integrals, applications from the earth and mineral sciences; sequences and series; analytic geometry; polar coordinates. Students may take only one course for credit from MATH 141, 141B, 141E, and 141G. MATH 141G Calculus with Earth and Mineral Sciences Applications II (4) (GQ) This course is the second in a sequence of three calculus courses designed for students in the earth and mineral sciences and related fields. Topics include inverse functions of exponential, logarithmic, and trigonometric functions; indeterminate forms and L’Hospital’s rule; various techniques of integration, including integration by parts, trigonometric integrals, trigonometric substitution, and partial fractions; improper integration; infinite sequences and series, tests for convergence and divergence of infinite series, including the integral test, comparison tests, ratio test, root test; power series, Taylor and Maclaurin Series; parametric equations and polar coordinates. The typical delivery format of the course is four 50-minute lectures per week, with typical assessment tools including examinations, quizzes, homework, and writing assignments.

Prerequisite: MATH 140 or MATH 140A or MATH 140B or MATH 140E or MATH 140G or MATH 140H.

Changes Effective Spring 2020:

- Description
- Abbreviated Title

MATH 141H: Honors Calculus with Analytic Geometry II (4 Credits) (H) (BA) (GQ)
Old Listing Effective Through Fall 2019:
Changes Effective Spring 2020:

MATSE 401: Thermodynamics of Materials (3 Credits)
Old Listing Effective Through Fall 2019:
Review of equilibrium thermodynamics and applications to metallurgical and material systems.
Prerequisite: CHEM 112
Changes Effective Spring 2020:
- Description
- Prerequisite/Corequisite/Concurrent Courses

MATSE 413: Solid-State Materials (3 Credits)
Old Listing Effective Through Fall 2019:
Structures of metallic, ionic, and covalent solids, amorphous materials, and surfaces; electronic structure; electronic properties of solids and their manipulation.
Prerequisite: or concurrent: MATSE201
Changes Effective Spring 2020:
- Description
- Prerequisite/Corequisite/Concurrent Courses

MATSE 430: Materials Characterization (3 Credits)
Old Listing Effective Through Fall 2019:
Elements of crystallography and the characterization of crystalline and non-crystalline materials using x-ray diffraction, electron microscopic, and other instrumental techniques. MATSE 430 Materials Characterization (3) This course will introduce students to characterization techniques for quantifying microstructure, chemistry and atomic structure of solid state materials. Elastic and inelastic interactions of radiation (e.g. electromagnetic and electrons) with solid state materials are the basis for most characterization techniques. Utilizing these interactions it is possible to obtain structural and chemical information from materials, often at small length scales. In this course, students will be introduced to the most common imaging, diffraction and spectroscopy techniques used for materials characterization. They will develop an understanding of the underlying physics behind the techniques to enable interpretation of the data. The course will be beneficial for any student interested in solid-state materials, as it provides a key component of the processing-structure-properties process.
Prerequisite: MATSE201, MATSE202 or MATSE443
Changes Effective Spring 2020:
- Prerequisite/Corequisite/Concurrent Courses

METEO 4: Weather and Risk (3 Credits) (GN)
Old Listing Effective Through Fall 2019:
Non-technical introduction to the science and historical development of meteorology, and the role of weather forecasting as a tool for risk management by individuals, businesses, and societies. METEO 004 Weather and Risk (3) (GN) METEO 004 traces the development of weather forecasting as both a scientific discipline and as a tool for risk management. Beginning from the pre-modern history of weather forecasting as a diverse set of folkloric and ritualistic practices, the emergence of meteorology as a genuine science has enabled the development of powerful tools for managing risks faced by individuals, businesses and societies. Students will learn about the fundamental principles that govern the global atmospheric circulation, and how this circulation shapes weather and climate. They will learn how this scientific understanding has served as the foundation of a global system of weather observation and forecasting, encompassing a worldwide network of atmospheric observing instruments, powerful computer modeling systems, and a highly elaborate system for disseminating information to diverse users. Demand for weather forecasts is driven by the need to manage weather risks confronting agriculture, transportation, the military, insurance, humanitarian relief, and virtually every other sector of society. Examples will be given of how forecasts are incorporated into the decision-making of businesses. This topic leads to a discussion of the economic value of weather information, and the role of public and private providers of information. The treatment is organized around three themes. First, the possibility of generating a forecast of future conditions requires the adoption of the perspective that the natural world has an underlying regularity, and that this regularity can be discovered and organized through research. The second theme is the critical role of instrumentation in providing the quantitative basis for formal scientific forecasting models. Third, developments in weather forecasting have not proceeded solely from improvements in scientific knowledge: rather, society’s demand for risk management toolshas acted as a constant spur on efforts to improve forecasting techniques, as part of a feedback loop between the producers and consumers of forecasts.

Changes Effective Spring 2020:
- Description

MUSIC 5: An Introduction to Western Music (3 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:
A general survey of art music in western society, highlighting important composers and stylistic developments. MUSIC 005 An Introduction to Western Music (3) (GA) (BA) This course meets the Bachelor of Arts degree requirements. MUSIC 005 is a course on listening, with emphasis on the relationship between musical style and historical context. The course begins with an introduction to the elements of music. The goal of this section is to give all students, whether they have previous experience as performers, the basic skills necessary to approach any musical work as intelligent listeners. This activity takes four weeks. The remaining portion of the course is spent surveying the history of Western art music, with that history treated as a series of case studies: particular works are considered stylistically with regard to the historical circumstances of their production and consumption. From this activity students gain experience considering artworksin discipline-specific terms, even as they learn to relate particular artistic features to nonmusical factors of culture and society. Three methods of evaluation are used. Four examinations test the students’ mastery of the course material. Four concert reports give students the opportunity to apply that knowledge to the act of listening in an authentic performance setting. An analytical
paper presents a more detailed challenge, asking students to evaluate a relatively complicated work (such as a Mozart symphony), which they come to know intimately through repeated listening, using the basic technical tools of a music theorist. This requirement also includes a historical-research component. The course requires a technology classroom (typically it is taught in the Forum). It is offered fall and spring semesters, with an enrollment of 300 each semester.

Changes Effective Spring 2020:

- Description

MUSIC 7: Evolution of Jazz (3 Credits) (US) (BA) (GA)
Old Listing Effective Through Fall 2019:

Study of the origins and development of jazz as an art form. MUSIC 7 Evolution of Jazz (3) (GA;US)(BA) This course meets the Bachelor of Arts degree requirements. Evolution of Jazz is a course designed to examine the historical and sociological of the American art form – jazz. This general education course is for non-majors. The material covered in this course begins with the precursors to jazz emphasizes the African musical traditions and white American (initially European) influences that have shaped jazz as an American art form. This is followed by period studies of the various jazz styles: New Orleans Dixie, Chicago Style Dixieland, Swing, Be-Bop, Cool, Hard Bop, Free Jazz, Fusion Jazz, Neo Bop, Latin Jazz, and New Age. The various jazz styles are examined from musical, sociological and economical perspectives. The major innovators and performers are identified and studied. As new styles are presented, a careful comparison to the previous style is done to help with classification. The primary objectives of the course are to create a greater appreciation for jazz music by providing knowledge about the intercultural development of jazz in America, by developing critical listening skills, and exposing students to the music representing various eras and performers of this music. A major component of the course is listening. Early in the course listening skills are taught. Students learn how to recognize certain instruments, hear the various sections within a group, and identify forms. Several written reviews of recorded and live jazz performances are required. Listening is also a part of each examination. This course is offered each fall, spring, and summer (one section each session) with an average enrollment of 40 each session.

Changes Effective Spring 2020:

- Description

MUSIC 261: Survey of Music History I (3 Credits) (IL) (BA) (GA)
Old Listing Effective Through Fall 2019:

A survey of music history from 1750 to the present, with readings, listening, and lecture. MUSIC 261 Survey of Music History I (3) (GA;IL) (BA) This course meets the Bachelor of Arts degree requirements. The course is a survey of music history from 1750 to the present, with readings, listening, and lecture. The principal objectives are: to acquaint students with important musical works from this period of European and American history; to place these works in their larger social, cultural, economic, and intellectual contexts; and to introduce analytical methods useful for describing technical musical features and relating those features to extra-musical concerns. As the third course in the music history sequence designed for music majors and minors, Music 261 forms a part of the core music curriculum required for advanced (400-level) study in the discipline. Assignments and evaluation methods are designed to help students develop their critical faculties and communication skills, through listening, reading, in-class discussion, examinations, and writing.

There is significant emphasis on intercultural and international competence through study of music from a range of European countries. Musical analysis is integrated with consideration of the historical, social, cultural, religious, and economic circumstances of the works’ production. The course stresses development of criteria of aesthetic judgment, with respect to musical style (deployment of the various musical elements: melody, harmony, rhythm, texture, timbre) and the relationship of style to non-musical historical factors. The course is normally offered in the fall semester. It requires a piano and audio equipment.

Changes Effective Spring 2020:

- Description

MUSIC 262: Survey of Music History II (3 Credits) (IL) (BA) (GA)
Old Listing Effective Through Fall 2019:

A survey of music history from 1750 to the present, with readings, listening, and lecture. MUSIC 262 Survey of Music History II (3) (GA;IL) (BA) This course meets the Bachelor of Arts degree requirements. The course is a survey of music history from 1750 to the present, with readings, listening, and lecture. The principal objectives are: to acquaint students with important musical works from this period of European and American history; to place these works in their larger social, cultural, economic, and intellectual contexts; and to introduce analytical methods useful for describing technical musical features and relating those features to extra-musical concerns. As the third course in the music history sequence designed for music majors and minors, Music 262 forms a part of the core music curriculum required for advanced (400-level) study in the discipline. Assignments and evaluation methods are designed to help students develop their critical faculties and communication skills, through listening, reading, in-class discussion, examinations, and writing.

There is significant emphasis on intercultural and international competence through study of music from a range of European countries and the United States. Musical analysis is integrated with consideration of the historical, social, cultural, religious, and economic circumstances of the works’ production. The course stresses development of criteria of aesthetic judgment, with respect to musical style (deployment of the various musical elements: melody, harmony, rhythm, texture, timbre) and the relationship of style to non-musical historical factors. The course is normally offered in the spring semester. It requires a piano and audio equipment.

Changes Effective Spring 2020:

- Description

NURS 203: First Aid and CPR (3 Credits) (GHA)
Old Listing Effective Through Fall 2019:

An introductory first aid course designed to provide the basic knowledge and skills to provide assistance to someone injured/ill. NURS 203 is an introductory first aid and safety course that is appropriate for nursing and non-nursing majors. The course focuses on basic safety precautions, knowledge and skills needed to provide immediate care necessary for someone injured or suddenly ill until professional help arrives. Infectious disease and the standard precautions to prevent disease transmission are incorporated in the course. Major topics include: medical and respiratory emergencies, poisoning, bleeding, sprains and fractures, and heat and cold emergencies. A card is issued to the student for First Aid and One-person CPR (not the Professional CPR or Healthcare Provider CPR) upon successful completion of the course.
Changes Effective Spring 2020:

• Description

**NURS 415: Community and Family Health Nursing (4 Credits) (US) (IL)**  
Old Listing Effective Through Fall 2019:

Therapeutic nursing care and health promotion concepts to families, groups and populations in the community. NURS 415 Community and Family Health Nursing—Concepts and Applications (4) (US;IL) NURS 415 US;IL focuses on nursing care of clients in the community and the family. This course allows students to work independently providing and improving health care of population groups within a diverse society. Upon completion of this course, the student will be able to synthesize knowledge from nursing, public health, family, and community theory as a foundation for culturally congruent community health nursing practice; utilize the nursing process and principles of primary, secondary, and tertiary prevention that are culturally appropriate in the care of community based clients who differ in terms of age, developmental stage, health beliefs values and practices; demonstrate interpersonal skills necessary for collaboration with and among culturally diverse consumers, community agencies, health professionals, and health related resources in the community; demonstrate the management and safety of client, family, and community care through appropriate use of concepts of leadership, case management, and group process; demonstrate understanding of epidemiological methods in gathering, analyzing, and utilizing data and be able to apply to diverse populations in the community; use coherent comprehensive, culturally sensitive and age appropriate communication in oral and written form; analyze biostatistical/epidemiological data and nursing evidence-based research findings to improve/enhance the delivery of nursing care to diverse populations in the community; identify recommended health screenings and immunizations and health promotional strategies throughout the life span; analyze the impact of culture as a significant influence on the health perceptions, interpretations, and behaviors of diverse groups; demonstrate the ability to perform comprehensive and risk assessments, to make critical decisions, and to take appropriate nursing actions in the area of community health; demonstrates the ability to practice the principles of health and safety in a caring manner to maximize client care outcomes across the lifespan. Teaching strategies include lecture, audiovisuolals, student presentations, discussion, clinical experiences, guest speakers, laboratory simulation and clinical experiences in varied clinical settings where the students are responsible for assessing, planning, implementing, and evaluating the care of families within the context of a community. Students have the opportunity to analyze the impact of culture on health perceptions, interpretations, and behaviors of diverse groups. The course is offered fall and spring semester of the senior year with approximately 120 students (60 at UP and 60 at HMC enrolled in clinical sections limited to 10 students per section).

Changes Effective Spring 2020:

• Description

**OLEAD 100: Introduction to Leadership (3 Credits) (BA) (GS)**  
Old Listing Effective Through Fall 2019:

This course introduces key leadership concepts and practices based on current theory and research. It is designed to help students to discover the knowledge and skills that are characteristic of effective leaders.

Changes Effective Spring 2020:

• Description

**PERCN 110: Percussion: Secondary (2 Credits) (BA) (GA)**  
Old Listing Effective Through Fall 2019:

Individual instruction in percussion one-half hour per week. For both music and non-music majors. PERCN 110J Percussion: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward competence playing the instrument(s), the study of appropriate repertoire, developing interpretive insights, acquisition of music reading skills, and acquiring both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State music ensembles by competitive audition. Evaluation of the student's progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned material (music, etude books, etc.), essential accessories (metronome, practice pad, etc.), and appropriate instrumental needs (sticks, mallets, small instruments, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

• Description

**PHIL 1: Basic Problems of Philosophy (3 Credits) (BA) (GH)**  
Old Listing Effective Through Fall 2019:

Introduction to central philosophical themes, including the mind/body problem, the existence of God, ethical problems, the nature of reality.
PHIL 1 Basic Problems of Philosophy (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. This course provides a critical introduction to, and overview of, fundamental philosophical problems. It includes an examination of historical and contemporary thought through in-class presentation, readings, discussions, and student writings. In this way, students will gain an understanding of diverse and often competing perspectives on basic human problems. These perspectives have shaped cultures and continue to influence thought and practice around the world today. Students will examine diverse viewpoints that will allow them to understand a wide range of views and challenge them to defend their own positions. This course involves active use of writing, speaking, and group projects. It provides opportunities for gathering information, analyzing problems, and synthesizing diverse perspectives. Finally, PHIL 1 allows students to link theory to their own lives and daily practice.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 2: Philosophy, Politics, and Social Theory (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Examines relations between political and social organizations, the justification and limits of the state, and issues concerning individuality and community. PHIL 002 Philosophy, Politics, and Social Theory (3) (GH) (BA) This course meets the Bachelor of Arts degree requirements. This course provides an introduction to central political and social theories as well as assumptions which underlie contemporary political and social structures and which shape the contemporary cultural environment. The course will discuss the ideas of central social and political philosophers, the broader historical and cultural context in which they work and worked, and the nature of the relations and influences between the two. Students will develop an appreciation of the nature of political and social values in the context of conflicting political visions as well as the critical skills with which to examine them. They will be graded on a collaborative annotated bibliography project, a collaborative position paper, evaluations of peer papers, and a comprehensive final exam. PHIL 002 satisfies the GH requirement and is geared towards non-Philosophy majors. It may be used to fulfill minor requirements in philosophy. This course is offered once a year with an enrollment of 150 to 200 students.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 3: Persons, Moral Values and the Good Life (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Major ethical positions and assumptions regarding questions of freedom, choice, obligation, and conflicts in contemporary moral conduct, values, and reasoning. PHIL 003 Persons, Moral Values and the Good Life (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. This course offers students a broad, coherent overview of moral issues, moral reasoning, and, questions concerning a good life. It emphasizes the thought of major, influential figures and their works. The course also allows students to apply to contemporary ethical issues the theories espoused by these figures. Students will compare, contrast, and critically assess competing theories of persons and goodness, their assumptions and background world views, and their implications for practice. Students will be graded on the basis of tests, papers and a comprehensive final exam. PHIL 003 satisfies the GH requirement and is geared towards non-Philosophy majors. It may be used to fulfill minor requirements in philosophy. This course will be offered once a year with an enrollment of 25 to 240 students.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 5: Philosophy, Art, and Film (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Explores relations between images and reality, representation and culture, and beauty and politics through film, artworks, and aesthetic theories. PHIL 005 Philosophy, Art, and Film (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. PHIL 005 provides a critical introduction to fundamental issues concerning the nature of art in general and film in particular, the nature of aesthetic experience, and the role of art and film in cultural criticism. This course has no prerequisites and assumes no background in philosophy; it would make an excellent introduction to philosophy for students interested in art, film, representation, and creativity. It includes an examination of historical and contemporary thought through films and videos, in-class presentations, readings, discussions, and student writings. These activities will allow students to gain an understanding of diverse, often competing, perspectives on basic human problems and the great influence of film and images in contemporary life. Students will examine diverse viewpoints that will allow them to understand a wide range of views and challenge them to defend their own positions. This course involves active use of writing, speaking, and group projects. It provides opportunities for gathering information, analyzing problems, synthesizing diverse perspectives, and developing one's own thought and the reasons for it by linking theory to practice.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 6: Philosophy and Literature in Western Culture (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Explores fundamental issues of human existence through the traditions of western literature and philosophy. CMLIT 006CMLIT (PHIL) 006 Philosophy and Literature in Western Culture (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. This course is designed to introduce students to the various interpretive approaches to literature and philosophy. The class will explore key philosophic themes as these are exhibited in imaginative literature, and in doing so will practice both philosophical interpretation of literature and literary treatment of philosophy. The central themes of this course could include, for example, self-knowledge and self-deception; self-isolation, alienation and community; conflict of moral responsibilities; the use and abuse of language; the meaning of art; the ideal of a “simple life;” normalcy and madness. The class will ask such questions as what counts as literature, what purpose it serves, what is the relationship between literature and
ideology, and whether a text can be considered independently from what the author wanted to say in it. Students may be graded by a variety of methods, including exams, papers, and individual and group projects. One example might be a collaborative annotated bibliography project, a collaborative position paper, individual evaluations of position papers, and a comprehensive final exam. This course is a non-major General Education Humanities course. It may be used to fulfill minor requirements in philosophy. This course may be used to fulfill an additional-course requirement in either the minor or the major in Comparative Literature, although it is geared primarily towards non-majors. This course will be offered once a year with an enrollment of 25-200 students depending on location. This course deals with literature and philosophy in the western tradition, and thus helps to complete the range of our other courses on western literature, such as Comparative Literature 001 and 002 (survey courses of Western Literature to the Renaissance, and Western Literature since the Renaissance), and Comparative Literature 401W and 402W (upper level chronological courses on Western Literature). This course differs from those however, by its strong emphasis on philosophical texts.

Cross-Listed Courses: CMLIT 6

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 7: Asian Philosophy (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Fall 2019:

Introduction to philosophical, moral, and aesthetic teachings of Asian traditions such as Hinduism, Buddhism (including Zen), Taoism, Confucianism, and Shintoism. PHIL 007 Asian Philosophies (3) (GH;IL) (BA) This course meets the Bachelor of Arts degree requirements. This class is an introduction to the major intellectual philosophical traditions of Asia: Hinduism, Buddhism and Zen Buddhism, Jainism, Confucianism and Neo-Confucianism, Taoism, and Korean thought. The course introduces students to Asian thought through careful study of major, representative texts and authors of each of these traditions. In addition, the course seeks to identify parallels and differences between Asian thought and Western philosophy, and also seeks to explore the intercultural and interdisciplinary vitality of Asian thought today.

Changes Effective Spring 2020:

- Description
- Add BA Other Cultures Designation

PHIL 9: Philosophy, Race, and Diversity (3 Credits) (US) (BA) (GH)
Old Listing Effective Through Fall 2019:

Critically examines the significance of race and cultural diversity for, and in, understandings of reality, knowledge, truth, morality, and justice. PHIL 009 Philosophy, Race, and Diversity (3) (GH;US)(BA) This course meets the Bachelor of Arts degree requirements. This course explores the diverse philosophical concepts and problems regarding race. It covers writings dealing specifically with critiques of the dominant theories and definitions of racial identity, thereby providing an introduction to the diversity of ethical and social approaches to questions concerning race. This course is designed to satisfy the criteria for a humanities course with a focus on diversity (General Education Humanities and Diversity Focused). In particular, it is designed to be an offering in the humanities insofar as it: (1) develops a broad, coherent overview of the meaning of cultural diversity itself (including a clarification of the conceptions of culture, race, gender, nationality, and pluralism); (2) stresses the writings of major theorists from both the traditional canon of Western thought and diverse traditions, most prominently African-America, Latin-American, Asian American, and Native American traditions; (3) helps students develop the skills to interpret and to assess the nature, forms, and place of human values in our multi-cultural world; (4) fosters a deeper appreciation of and more critical attitude toward the ultimate ends of human action; (5) offers ample opportunities to engage in comparative philosophy and, allied with these, numerous challenges to communicate clearly, think logically, and evaluate critically the positions and perspectives being compared; (6) meets fully the stated objectives of general humanities education by providing students with texts occupying a central place in one or more human cultures and, then, by working through these texts in a careful and critical manner (such a process of working through these texts being also one of thinking critically and imaginatively about the questions posed by the texts, moreover one of being invited or even forced to integrate various perspectives). As a diversity focused course, PHIL 009 will carefully treat the philosophical issues of pluralism, universalism, diversity, and community. It will also pay careful attention to the diverse philosophies of different cultural communities. The conflicts between cultural localism and global economics will receive critical attention. In particular, this course will: (1) focus initially on ethnicity and race, then on gender and globalism; (2) encourage students to develop an understanding of the intellectual and ethical backgrounds and assumptions of other traditions and peoples; (3) help students develop a truly global, pluralistic, and multi-cultural viewpoint; and (4) explore the intellectual history of groups identified by ethnicity, race, gender, and religion. Students will be graded on a collaborative annotated bibliography project, a collaborative position paper, individual evaluations of position papers, and a comprehensive final exam. The course is intended as a General Education Humanities and Intercultural/International competency course and as such may serve as an historical overview of race and diversity in philosophy as well as an introduction to critical thinking about topical issues. This course may provide introductory material for courses in anthropology, political science, sociology, philosophy, and so on. More importantly, it may encourage students to think more carefully and critically about the questions raised in this course and their manifestation in social and political life. The course is a non-major General Education Humanities and Intercultural course intended for non-philosophy majors. It may be used to fulfill minor requirements in philosophy. PHIL 009 will be offered once per year with 150-200 seats per offering.

Changes Effective Spring 2020:

- Description
- Add BA Humanities Designation
- Abbreviated Title

PHIL 10H: Critical Thinking (3 Credits) (H) (GH)
Old Listing Effective Through Fall 2019:

discussion of the validity, soundness, and fallacies of everyday language use and reasoning; informal logic; and manipulative arguments and propaganda.

Changes Effective Spring 2020:

- Description
- Add BA Humanities Designation
- Abbreviated Title
PHIL 11: Philosophy, Science, and Truth (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Examines the philosophical foundations of natural scientific inquiry, knowledge, objectivity, and the relation of scientific truth to common sense. PHIL 011 Philosophy, Science, and Truth (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. This course familiarizes students with concepts and problems in the philosophy of science and scientific method, with a view towards problems of truth and the philosophical foundations of scientific inquiry. The course develops students' abilities to reason inductively as well as deductively and to examine the nature of reasoning and its role in scientific inquiry. Students will be graded on participation, case study analyses, a group presentation and response, and a final paper. PHIL 011 satisfies the GH requirement and is geared towards non-Philosophy majors. It may be used to fulfill the minor requirements in philosophy. This course is offered once a year with an enrollment of 25-200 students.

Changes Effective Spring 2020:

• Description
• Title
• Abbreviated Title

PHIL 12: Symbolic Logic (3 Credits) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Formal logical structures of propositions and arguments; mechanical tests and proof techniques for logically necessary truth and deductive validity.

Changes Effective Spring 2020:

• Description
• Title
• Abbreviated Title

PHIL 14: Philosophy of Love and Sex (3 Credits) (US) (BA) (GH)
Old Listing Effective Through Fall 2019:

Explores Western theories and attitudes concerning intimacy and examines various ethical issues involving love and sex. PHIL 014 Philosophy of Love and Sex (3) (GH;US)(BA) This course meets the Bachelor of Arts degree requirements. An examination of theories and attitudes concerning love and sexuality that have been prevalent in the Western world. Course topics will include philosophical and theological conceptions of sex and love and ethical issues related to these topics, including monogamy, same-sex marriage, cultural differences, pornography, and consent. The course will focus on contemporary US beliefs and practices examined through the lens of the different beliefs and practices concerning intimacy within the cultures of the US. The lens of gender, race/ethnicity, and sexual orientation will be ongoing themes of the class and included in all topics. The course has no prerequisites and assumes no background in philosophy. It is an excellent introductory course for students interested in learning the skills of doing philosophy. The course will focus on linked ethical issues that will be investigated through readings, essays, and group projects and are designed to encourage students to cultivate ethical awareness and inquiry by understanding and investigating diverse viewpoints and developing a richer understanding of their own positions. The course will provide opportunities for gathering information, analyzing arguments, synthesizing diverse viewpoints, and developing a richer understanding of and support for one's own beliefs and practices. Students will be evaluated based on class participation, short essays, examinations, and group presentations. The course will serve as a GH and GI requirement and it may be used to fulfill minor requirements in philosophy. The course will be offered once a year with 25-250 seats per offering.

Changes Effective Spring 2020:

• Description
• Title

PHIL 103: Introduction to Ethics (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Ethical theory about virtue, duty, autonomy, and life quality applied to moral problems, including character, violence, oppression, abortion, and suicide. PHIL 103 Introduction to Ethics (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. This course, as with other 100-level philosophy department courses, is intended for Liberal Arts majors and others likely to take philosophy courses rather than for philosophy majors. (The analogous course for majors is PHIL 418: Ethics.) PHIL 103 introduces students to the major aspects of ethics: the nature of ethical reasoning, the major ethical traditions and their similarities and contrasts, as well as enduring ethical issues that link theory to practice in critical ways. This is an introductory course and addresses issues that any student, no matter what major, will face. Students will be graded on quizzes, re-writing and expanding quizzes, a collaborative project, and a comprehensive final exam. PHIL 103 satisfies the GH requirement and it may be used to fulfill major and/or minor requirements in philosophy. This course is offered once a year with an enrollment of 25-50 students.

Changes Effective Spring 2020:

• Description
• Title
• Abbreviated Title

PHIL 109: Introduction to Aesthetics (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Examines the nature of art and aesthetic experience, art's relation to beauty and truth, and the nature of creativity. PHIL 109 Introduction to Aesthetics (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. This course, as with other 100-level philosophy department courses, is intended for Liberal Arts majors and others likely to take philosophy courses rather than for Philosophy majors. (The analogous course for majors is PHIL 409: Aesthetics). PHIL 109 is designed to introduce students to the various problems surrounding the philosophical treatment of the various arts. Aesthetics, or the philosophy of art, is a systematic exploration of aesthetic experience, creativity, various theories of beauty, and principles on which criticism of the arts (including literature) can be based. This is a special field of philosophy which focuses on the arts and the creative process, but which, for some thinkers, involves many links to other aspects of human existence, including the political and various metaphysical questions about being and human being. The objective will be to give students a good grounding in these various problems and to expose them to important perspectives and approaches to these problems and to the question of the place of art (as the arts generally) in human existence. Emphasis will be placed on both historical and perspectival sweep in the course and, as a result, the students should leave the course with an enriched understanding of the nature of the arts, of the creative process itself, and of the place both play in being human. Students will be graded on participation, comparison/contrast papers, a position paper, a collaborative presentation, and a comprehensive final exam. PHIL 109 satisfies the GH requirement and it
may be used to fulfill the major and/or minor requirements in Philosophy. This course is offered once a year with an enrollment of 35-50 students.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 110: Introduction to Philosophy of Science (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Examines science's assumptions about knowledge and reality, the relation between science and culture, and the nature of scientific progress. PHIL 110 Introduction to Philosophy of Science (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. This course, as with other 100-level philosophy department courses, is intended for Liberal Arts majors (and in this case for Science majors as well), as well as for others likely to take philosophy courses rather than for Philosophy majors. (The analogous course for majors is PHIL 410: Philosophy of Science). PHIL 110 is designed to give students a coherent presentation of science's assumptions about knowledge and reality, the relation between science and culture, and the nature of scientific progress. Historical foundations of science will be addressed as well as contemporary theories and issues, as the class examines the following topics: the relation between physics, mathematics, and philosophy; the nature of reality; the nature of knowledge; the nature of causality; the nature of scientific progress, and the nature of hypothesis in natural science. Students will be required to critically examine and evaluate the positions, relations, and theories addressed in class. They will be graded on class discussion, exams, a collaborative web project, and a final paper. PHIL 110 satisfies the GH requirement and it may be used to fulfill major and/or minor requirements in Philosophy. This course is offered once a year with an enrollment of 35-50 students.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 118: Introduction to Environmental Philosophy (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Considers the moral status of the environment and applies ethical theory to issues such as preservation, hunger, pollution, and sustainability. PHIL 118 Introduction to Environmental Philosophy (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. This course, as with other 100-level philosophy department courses, is intended for Liberal Arts majors and others likely to take philosophy courses rather than for Philosophy majors. (The analogous course for majors is PHIL 418: Environmental Ethics.) PHIL 118 will provide an historical and contemporary survey of differing views of the relation of humans and nature, and of environmental problems and human development. The course will provide a critical examination of differing conceptions of value in regard to nature and differing conceptions of human values and the human condition more generally. The course will investigate how different social, economic, and political ideologies and systems affect the human relation to nature, and how the ethical problems that arise from such systems may be critically evaluated and potentially resolved. Students will be graded on participation, case study analyses, a group presentation and response, and a final paper. PHIL 118 satisfies the GH requirement and it may be used to fulfill the major and/or minor requirements in Philosophy. This course will be offered every other year with an enrollment of 25-100 students.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 122: Introduction to Philosophy of History (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Examines methodological foundations and interpretations of history, the objectivity of history, and the issue of history as design or chance. PHIL 122 Introduction to Philosophy of History (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. This course, as with other 100-level philosophy department courses, is intended for Liberal Arts majors and others likely to take philosophy courses rather than for Philosophy majors. (The analogous course for majors is PHIL 422.) PHIL 122 will provide a critical survey of key problems, concepts, ideologies, and figures in the history of philosophy of history, and encourage and develop the student's analytical and critical interpretation and evaluation of the theses presented. The course will study key questions regarding the human past and the potentiality of the human future as reflective of the human condition more broadly. It develops a broad, coherent overview of the nature and philosophical status of history and the philosophical assumptions and issues in the practice of history. It also emphasizes the thought of major, influential figures and their works, such as Hume, Vico, Hegel, Marx, Mill, Rickert, Dilthey, Croce, Collingwood, Mandelbaum, Hempel, and Randall. Students will be graded on participation, comparison/contrast papers, a position paper, a collaborative presentation, and a comprehensive final exam. PHIL 122 satisfies the GH requirement and it may be used to fulfill the major and/or minor requirements in Philosophy. This course is offered every other year with an enrollment of 35-50 students.

Changes Effective Spring 2020:

- Description
- Title
- Abbreviated Title

PHIL 132: Introduction to Bioethics (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Studies questions of ethics in relation to biotechnology research and implementation, genetic engineering, medicine, animal and human rights. PHIL 132 (RL ST 131) Introduction to Bioethics (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. The course, as other 100-level Religious Studies Program and Philosophy courses, is intended for Liberal Arts majors and others likely to take Religious Studies and Philosophy courses rather than for Religious Studies majors. This course will provide a critical survey of key concepts, problems, and figures in the short history of bioethics and in contemporary studies and possible future directions. The course will develop the student's analytical and critical skills through study of different views on the nature of life and what experimention with life-forms morally entails. The course will examine the increasingly techno-scientific definition of the nature of life and the human condition and evaluate such arguments and positions of practice in regard to opposing views of life as inherently sacred. It
will investigate the extent and breadth of moral arguments in regard to differing life forms and consider the rights of humans and non-human animals. Students will be graded on participation, case study analyses, a group presentation, and a final paper. PHIL 132/RL ST 131 satisfies the GH requirement and it may be used to fulfill major and/or minor requirements in Philosophy and Religious Studies. This course is offered every other year with an enrollment of 35-50 students.

Cross-Listed Courses: RLST 131

Changes Effective Spring 2020:
• Description
• Title
• Abbreviated Title
• Remove Cross-Listing RLST 131
• Add Cross-Listing BIOET 100

PHIL 201: Medieval Philosophy (3 Credits) (BA) (GH)
Old Listing Effective Through Fall 2019:

Examines the thought and influence of major Western thinkers from the fourth to the fifteenth centuries, emphasizing Augustine and Aquinas. PHIL 201 Medieval Philosophy (3) (GH)(BA) This course meets the Bachelor of Arts degree requirements. As part of the history of philosophy sequence required of undergraduate Philosophy majors, this course is designed to examine the movements of thought and major thinkers from the fourth to the fifteenth centuries. The course will begin by studying the historical and philosophical foundations of Medieval thought through an examination of philosophical problems from Ancient Philosophy. It will proceed to a study of Augustine, Islamic Philosophy, Jewish Philosophy, Aquinas, Ockham, and Duns Scotus. Students will be required to critically analyze the texts of the philosophers studied in class, as well as to compare, contrast, and critically evaluate the ideas of these thinkers. They will be graded on participation, comparison/contrast papers, a position paper, a collaborative presentation, and a comprehensive final exam. PHIL 201 satisfies the GH requirement, it may be used to fulfill the minor requirements in Philosophy, and it is a prerequisite to the 400-level courses. This course will be offered once a year with an enrollment of 35 students.

Changes Effective Spring 2020:
• Description

PHIL 418W: Ethics (3 Credits) (WF) (BA)
Old Listing Effective Through Fall 2019:

Examines ethical theories, justice, rights, community, and human values revolving around such issues as preservation, conservation, pollution, sustainability, and population. Prerequisites: 9 credits of philosophy, including PHIL 103 or 6 credits of philosophy at the 200 level

Changes Effective Spring 2020:
• Description
• Title
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

PHYS 150: Technical Physics I (3 Credits: Maximum of 3 Credits) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Elementary treatment of topics in mechanics, heat, wave motion, and sound leading toward an understanding of technical applications. PHYS 150 Technical Physics I (3) (GQ) provides an algebra-based introduction to mechanics, heat, wave motion, and sound exemplifying scientific method and leading toward an understanding of technical applications. It is the first course in a two-course sequence with PHYS 151 surveying all of physics. It includes topics such as measurement, dimensional analysis, systems of units, describing motion in one dimension, scalars and vectors, describing motion in two and three dimensions, projectile motion, circular motion, particle dynamics via Newton’s Laws of Motion, forces, work and energy, momentum, systems of particles, collisions, rotational motion of rigid bodies, torque, moment of inertia, static equilibrium, mechanical advantage, mechanical properties of materials, fluids, vibrations, wave motion, sound, temperature, heat, thermodynamics, and heat transfer. Students attend two lecture/recitation
classes and one two-hour laboratory/activity period per week. Classes emphasize conceptualizing the basic ideas, terminology, and principles of the physical phenomena of nature; their quantitative expression through algebra and trigonometry; their relation to applications in science and technology; and their use in quantitative problem solving. Both computer-based and traditional lab exercises and activities illustrate class material and scientific method while giving students experience with a variety of measuring tools and the general principles of measurement, including the analysis of error. Students work collaboratively in small groups to plan their measurements, collect and analyze data (often using modern computer hardware and software), make judgments based on their results, and communicate their efforts and conclusions in a written lab/activity report. The prerequisite for this course is 1 1/2 units of algebra. Prerequisite or Concurrent: MATH 21 or MATH 81. It is a prerequisite for PHYS 151 and is a required course for many engineering technology programs. It is offered at least once per academic year at all Penn State locations with engineering technology programs. Class size varies up to about 80 students per lecture section and 21 to 24 students per lab/activity section. Course evaluation is based on a combination of regular homework assignments and/or quizzes, written lab/activity reports, two or three exams, and a final exam.

Prerequisite: 1 1/2 units of algebra. Prerequisite or concurrent: MATH 021 or MATH 081

Changes Effective Spring 2020:

- Description

PHYS 151: Technical Physics II (3 Credits: Maximum of 3 Credits) (BA) (GQ)
Old Listing Effective Through Fall 2019:

Elementary treatment of topics in electricity, light, and modern physics leading toward an understanding of technical applications. PHYS 151 Technical Physics II (3) (GN) provides an algebra-based introduction to electricity, light, and modern physics exemplifying scientific method and leading toward an understanding of technical applications. It is the second course in a two-course sequence with PHYS 150 surveying all of physics. It includes topics such as electric charge, electric force, electric field, electric potential difference, capacitance, cathode-ray tube, electric current, Ohm’s Law, batteries, direct current circuits, resistors, ammeters, voltmeters, magnetic force, magnetic field, electromagnetic induction, motors, generators, transformers, inductors, alternating current circuits, electromagnetic waves, light, reflection, refraction, interference, diffraction, atomic physics, atoms in combination, and the nucleus. Students attend two lecture/recitation classes and one two-hour laboratory/activity period per week. Classes emphasize conceptualizing the basic ideas, terminology, and principles of the physical phenomena of nature; their quantitative expression through algebra and trigonometry; their relation to applications in science and technology; and their use in quantitative problem solving. Both computer-based and traditional lab exercises and activities illustrate class material and scientific method while giving students experience with a variety of measuring tools and the general principles of measurement, including the analysis of error. Students work collaboratively in small groups to plan their measurements, collect and analyze data (often using modern computer hardware and software), make judgments based on their results, and communicate their efforts and conclusions in a written lab/activity report. The prerequisite for this course is PHYS 150. It is a required course for many engineering technology programs. It is offered at least once per academic year at all Penn State locations with engineering technology programs. Class size varies up to about 80 students per lecture section and 24 students per lab/activity section. Course evaluation is based on a combination of regular homework assignments and/or quizzes, written lab/activity reports, two or three exams, and a final exam.

Prerequisite: PHYS 150

Changes Effective Spring 2020:

- Description

PLSC 14: International Relations (3 Credits) (IL) (BA) (GS)
Old Listing Effective Through Fall 2019:

Characteristics of modern nation-states and forces governing their international relations; nationalism; imperialism; diplomacy; current problems of war and peace. Credit will not be given for both this course and INT U 200. PL SC 014 PL SC 014 International Relations (3) (GS) (BA) This course meets the Bachelor of Arts degree requirements. This course has three major goals. First, you should come away from this course with an idea of what the scientific study of Political Science is all about. Second, you should come away from the course knowing some general theories (explanations) for international behavior that you should use when you think about international politics in the future. Third, you will be introduced to a number of important topics in international politics. These include the end of the Cold War, nuclear weapons, international economics, and international development. Students will take examinations that include short answer and essay questions. Short projects or papers will supplement exams. Students are also graded on attendance, participation, and oral presentations in weekly recitation sections. The course fulfills one of the lower-division requirements for majors in political science and international politics. For non-majors this course may be used to fulfill a general education or bachelor of arts social/behavioral science requirement. It will be offered at least once per academic year with an enrollment limit of 180.

Changes Effective Spring 2020:

- Description

PLSC 14H: International Relations (3 Credits) (H) (IL) (BA) (GS)
Old Listing Effective Through Fall 2019:

Characteristics of modern nation-states and forces governing their international relations; nationalism; imperialism; diplomacy; current problems of war and peace. Credit will not be given for both this course and INT U 200.

Changes Effective Spring 2020:

- Description

PLSC 132: The Politics of International Intolerance (3 Credits) (IL) (BA) (GS)
Old Listing Effective Through Fall 2019:

Introductory course emphasizing psychological, historical, and political aspects of global intolerance towards minorities. PL SC 132 The Politics of International Intolerance (3) (GS) (IL) (BA) This course meets the Bachelor of Arts degree requirements. PL SC 132 is an introductory survey concerning the social phenomenon of “intolerance” i. e., attitudes or behaviors that seek to exclude or eliminate groups perceived to be different. Here “difference” encompasses such features as nationality, belief, race, gender, or sexual orientation. Often these aspects of
the human condition are the targets of majority discrimination or collective violence. The course presumes the following assumptions: (1) Intolerant attitudes are not just "another point of view" but also an utterly destructive form of behavior inimical to civilized values. (2) Few, if any, societies have existed without some forms of intolerance. (3) The causes of intolerance are usually multi-causal (economic, political, and psychological) and are understood through social science. (4) "Politics" implies both the ideology and organization of intolerant movements and the relation of such movements to public authorities. Students should expect fairly extensive readings involving primary source material, analyses of intolerant behavior drawn from different disciplines, and comparison of intolerance phenomena from a global perspective. All examinations are in an essay format and may require synthesis of sources to address specific questions. Each student should be prepared to research an example of intolerance through print and electronic sources. A short paper based on the research should emphasize comparison, analysis, and consequences. The finding may be presented to the class for discussion.

Changes Effective Spring 2020:
- Description
- Abbreviated Title

PSYCH 83: First-Year Seminar in Psychology (3 Credits) (BA) (GS) Old Listing Effective Through Fall 2019:

Scientific, societal, and individual implications of contemporary psychological theory. PSYCH 083S First-Year Seminar in Psychology (3) (GS;FYS) ( BA) This course meets the Bachelor of Arts degree requirements. Modern science provides perspectives on human beings that may conflict with our intuitive and conventional views of ourselves as individuals capable of free choice and responsibility. These perspectives raise important questions for how we understand ourselves and others: Does brain chemistry govern our moods and motivations? Do our genes determine our abilities? Is the human mind just a kind of computing machine? Views based on the biology of behavior and on the computer metaphor for the mind can be found both in a wide range of academic disciplines, including psychology, anthropology, sociology, biology, neuroscience, medicine, and computer science. Perhaps more important, these perspectives are apparent in the news media, entertainment, and other aspects of popular culture. Biological and technological views of what it means to be human are thus shaping our common-sense understanding of our selves and others. The goal of this course is to help students to understand the basis of these contemporary scientific views of human beings, and to think critically about the ways in which these views shape human experience. We will read three scholarly but accessible paperbacks (listed below), two that present biological and technological perspectives, and one that provides a critical counterpoint. We will also consider selections from popular media, including news stories, movies, and fiction, to examine the appearance of these perspectives in our contemporary culture. On a more pragmatic level, we will consider ways in which scientific perspectives can help students understand their own learning processes, leading to more effective academic skills. The class format will be open discussion, and students will be expected to come to class prepared to discuss the assigned readings. Evaluation will be based on 10 short writing assignments, a term paper or take-home final, an in-class presentation, and class participation. Writing assignments will generally require that students apply concepts discussed in class to particular topics, or that they use library and Web resources to find relevant material. In addition to the academic topic and issues of this course, students can expect to gain a general introduction to the University as an academic community and have the opportunity to explore their responsibilities as members of that community. Students will develop an understanding of the learning tools and resources available to them including the opportunity to develop relationships with faculty and other students who share their academic interests. This course fulfills the first-year seminar requirement as well as a general education or Bachelor of Arts social/behavioral science requirement.

Changes Effective Spring 2020:
- Description
- Number to 83S

PSYCH 100: Introductory Psychology (3 Credits) (BA) (GS) Old Listing Effective Through Fall 2019:

Introduction to general psychology: principles of human behavior and their applications. PSYCH 100 Psychology (3) (GS)(BA) This course meets the Bachelor of Arts degree requirements. Psychology is a scholarly discipline, a scientific field, and a professional activity. Its overall focus is the scientific study of behavior and experience, and of associated mental and physiological processes. As a scholarly discipline, psychology represents a major field of study in academic settings, with an emphasis on theories and principles of behavior and experience. As a science, psychology is a domain of research in which investigators analytically and systematically study behavior and experience to develop theories and principles and to understand their application to real-world situations. As a profession, psychology involves the practical application of knowledge, skills, and techniques for enhancing well-being and quality of life, as well as solving or preventing individual and social problems. This course provides an overview of the field of psychology, including research, theory, and application. Specific topics include the biological bases of behavior, sensation and perception, learning, cognition, motivation and emotion, development, social cognition and social influence, personality and individual differences, and mental disorders and therapy. Content is presented through a combination of lectures, readings, and demonstrations. Evaluation is primarily on the basis of objective exams given in class. A major goal of the course is to show how questions within these areas are addressed through empirical research. The course introduces students to theories, research, and procedures used in psychological research and practice. It also promotes thinking about how students can apply this knowledge to enhance their lives. After taking this course students should be able to make more informed decisions about participating in future psychology courses and have a better understanding of psychology as a science and of human behavior. This course serves as a prerequisite for most upper-level psychology courses. It introduces basic concepts covered in more depth in those courses. PSYCH 100 is required for the Psychology majors and minor. PSYCH 100 is offered three times per year. Five to six sections/semester are offered at University Park with 330-370 students per section; other locations and delivery channels may offer smaller sections.

Changes Effective Spring 2020:
- Description

PSYCH 200: Elementary Statistics in Psychology (4 Credits) (GQ) Old Listing Effective Through Fall 2019:

Frequency distributions and graphs; measures of central tendency and variability; normal probability curve; elementary sampling and reliability; correlations; simple regression equations. PSYCH 200 Elementary Statistics in Psychology (4) (GQ) Psychological science is based upon
empirical research. Questions about behavior and experience are answered by gathering and analyzing data. In upper-level classes students will be expected to read and understand this research, and many will be expected to design sensible investigations of their own. At the core of these skill sets is the ability to understand and perform statistical analyses, and the ability to evaluate the match between statistical analysis and experimental procedures. This course provides an introduction to descriptive and inferential statistics commonly used in psychology, and introduces hypothesis testing as a method of scientific investigation. In addition, it explores the ways in which the assumptions of statistical tests place constraints on experimental design and, conversely, how the design of experiments can dictate the statistical test appropriate for data analysis. Specific topics include probability theory, measures of variability and central tendency, normal curves, the relation between samples and populations, correlations, and simple regression. Classes may also cover z-tests, t-tests, ANOVA, or other techniques commonly used in psychology. Content is presented through a combination of lectures, readings, and demonstrations. Evaluation is primarily on the basis of objective exams given in class. The course introduces students to quantitative procedures used in psychological research and practice. It also promotes thinking about how students can apply this knowledge to answer self-generated questions. With PSYCH 301W (Basic Research Methods in Psychology) the course provides an excellent two-course sequence to prepare students for upper-level courses. After taking this course students should be able to make more informed decisions about majoring in psychology. This course serves as a prerequisite for PSYCH 301W, which itself prerequisite for many some upper-level psychology courses. PSYCH 200 or Stat 200 is required for the Psychology majors and minor.

Prerequisites: PSYCH 100; MATH 21

Changes Effective Spring 2020:

- Description

PSYCH 212: Introduction to Developmental Psychology (3 Credits) (BA) (GS)

Old Listing Effective Through Fall 2019:

Developmental principles; physical growth; linguistic, intellectual, emotional, and social development from infancy to maturity. PSYCH 212 Introduction to Developmental Psychology (3) (GS)(BA) This course meets the Bachelor of Arts degree requirements. Developmental psychology involves the scientific study of the social, emotional, and intellectual changes that enable progression from infancy to adulthood. As part of a scholarly discipline, scientific field, and professional activity, the overall focus of developmental psychology is the scientific study of age-related changes in emotions, cognitions, language, personality and social relations and the relationships of these changes to familial, peer, and cultural experiences, biological development, and personal efforts to make sense of the social and object worlds. As an important area of psychological science, developmental psychology is a domain of research in which investigators analytically and systematically study behavior and experience to develop theories and principles and to understand their application to real-world situations. As part of a profession, developmental psychology involves the practical application of knowledge, skills, and techniques for enhancing the well-being and quality of life of children, adolescents, and their families, as well as the development of age-relevant solutions to and strategies for the prevention of individual and social problems. This course provides an overview of the field of developmental psychology, including its history, research methodologies, theories, and applications. Specific topics include the biological bases of development, parent-infant attachment, the development of sensation and perception, cognition and linguistic development, emotional development, moral development, stereotype development, childhood and adolescent psychopathology and its development. Content is presented through a combination of lectures, readings, activities, and demonstrations. Evaluation is primarily on the basis of objective exams given in class. A major goal of the course is to show how questions within these areas are addressed through empirical research. The course introduces students to theories, research, and procedures used in psychological research and practice. It also promotes thinking about how students can apply this knowledge to enhance their lives. After taking this course students should be able to make more informed decisions about participating in future psychology courses and have a better understanding of human development, psychology as a science, and the importance of developmental psychology to the construction and improvement educational programs and clinical practice. PSYCH 212 may be applied to the requirements of the Psychology BA and Psychology BS majors and of the Psychology minor. The course meets the Social/Behavioral Sciences requirement. This course will be offered three times a year at University Park 330-350. Other locations and delivery channels may offer smaller sections.

Prerequisite: PSYCH 100

Changes Effective Spring 2020:

- Description

PSYCH 221: Introduction to Social Psychology (3 Credits) (BA) (GS)

Old Listing Effective Through Fall 2019:

Research and theory on topics including interpersonal attraction, aggression, helping, attitudes, attribution, cooperation, competition, and groups, from a psychological perspective.

Prerequisite: PSYCH 100

Changes Effective Spring 2020:

- Description

PSYCH 231: Introduction to the Psychology of Gender (3 Credits) (US) (BA) (GS)

Old Listing Effective Through Fall 2019:

Psychological study of gender in historical and contemporary perspective. Role of gender in development, self-concept, social relations, and mental health. PSYCH 231 Introduction to the Psychology of Gender (3) (GS;US)(BA) This course meets the Bachelor of Arts degree requirements. After a beginning period of domination by men, the rise of feminism in the 1960s and 1970s in the US gave impetus to the study of women and gender. Through both traditional and feminist research methods, psychologists have sought to clarify what is general among and between women and men, and what may be individualized to specific persons or groups. Conceptions of gender are also examined cross-culturally. Emphasis of study is upon those experiences that are specifically related to gender, such as stereotypes and expectations of femininity, violence against women, economic and work-related constraints, and pregnancy and childbirth. There will be two major evaluation methods used. One will be tests that will assess students’ knowledge and understanding of the major concepts, theories, and research findings. The other will be assignments that will provide the opportunity for students to apply, research, analyze, and discuss key areas of the course. Psychology 231 is intended as a basic introduction
Changes Effective Spring 2020:

- Description

PSYCH 232: Cross-Cultural Psychology (3 Credits) (US) (IL) (BA) (GS)

Old Listing Effective Through Fall 2019:

This course examines how ethnic and cultural background influences patterns of human thought and behavior. PSYCH 232/PSYCH 232 Cross-Cultural Psychology (3) (GS;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. Cross-cultural psychology investigates the influence of sociocultural factors on human thought and behavior. It will revisit the topics covered in introductory psychology in order to investigate the degree to which the major findings in each subdiscipline are culturally universal and/or culturally specific. The course will reflect the interdisciplinary nature of cross-cultural psychology by examining issues that link psychology to other fields such as anthropology, sociology, economics, and political science. One goal of the course will be to develop an understanding of the problems involved in the design and interpretation of studies comparing ethnic or racial groups, both within and across national boundaries. Students will learn to identify how subtle forms of ethnocentric bias influence both the research questions asked and the conclusions that are reached and will learn ways to identify and avoid such bias. Students will learn to analyze and integrate knowledge from a variety of sources including films, readings, scientific literature and the popular media. Course projects will require them to interact in a respectful and sensitive manner with people of other cultures in person and via the Internet. Students will learn to critically examine their own beliefs as well as the information that they encounter about culture and ethnicity inside and outside of the classroom. They will enhance their oral and written communication skills during class discussions, small group and collaborative exercises and presentations. Topics are covered that have a significant body of cross-cultural research and are directly relevant to students’ lives, including issues such as: child-rearing practices around the world, culture-fair intelligence testing, aggression and ethnic conflict, and cultural influences on therapeutic success. By studying psychology from a cross-cultural perspective, students should become more aware of the diversity of the international community and develop an increased understanding and tolerance of attitudes and viewpoints different from their own. Evaluation is conducted using integrative essay exams, completion of readings quizzes, and papers and presentations of case studies and learning activities. The course fulfills general education requirements in the social and behavioral sciences and requirements for intercultural/international competence.

Prerequisites: PSYCH 100

Changes Effective Spring 2020:

- Description

PSYCH 238: Introduction to Personality Psychology (3 Credits) (BA) (GS)

Old Listing Effective Through Fall 2019:

Past and recent conceptualizations of key issues and root ideas of personality psychology. PSYCH 238 Introduction to Personality Psychology (3) (GS)(BA) This course meets the Bachelor of Arts degree requirements. Personality psychology involves examining theories of human nature and evaluating them in an empirical fashion. Personality psychology begins with the observation that each person is (to paraphrase Harvard psychologists Kluckhohn and Murray) in certain respects (a) like all other persons, (b) like some other persons, and (c) like no other person. In other words, personality psychology concerns itself with the study of (a) universal aspects of human nature, (b) psychological traits and types, and (c) individual uniqueness. Principal goals of the discipline include constructing descriptive taxonomies of personality, inquiring into the evolutionary and developmental origins of human universals and individual differences, and assessing the impact of personality on the life course. This course aims to cultivate in students a breadth of understanding through an analysis of some of the major intellectual statements concerning human nature, viz., psychoanalysis, humanism, existentialism, symbolic interactionism, and Darwinism. Questions considered within the course include: How can we determine what might be a part of fundamental human nature? What are the relative contributions of conscious rationality and unconscious irrationality to human behavior? Can human behavior be explained by a finite set of motives? Do explanations in psychology differ in kind from explanations in the natural sciences? Can personality be quantified? How does one distinguish between sincerity, dissembling, and self-deception? Short-answer examinations and class participation are used to evaluate the degree to which students have successfully comprehended course material. Students should understand why it is difficult for a theorist to create a view of human nature that transcends the theorist’s own personality and cultural/historical context, and how empirical research can help overcome these obstacles. Students are to learn how to identify and evaluate the assumptions (either implicit or explicit) about human nature and individual differences that underlie any social or behavioral science. By the end of the course, students should be able to describe the basic tenets of the major theories, to be able to compare and contrast the theories, and to be able to evaluate the strengths and weaknesses of each theory. A good understanding of the course material will prepare students for advanced study in personality theory and measurement, as well providing a useful context for courses in abnormal, clinical, developmental, health, historical/philosophical, industrial/organizational, and social psychology, as well as for courses in other social sciences, certain humanities, and some applied fields such as business which at least tacitly presuppose some view of personality. Students are evaluated on examinations that include a mixture of short answer and objective questions. Individual instructors may supplement such examinations with other forms of evaluation as appropriate to section size and setting, such as in-class exercises and term papers. PSYCH 238 is an Additional Course in the PSYBA and PSYBS majors and may count toward the Psychology Minor. It may be used to fulfill the Social and Behavioral Sciences requirement. This course will be offered once a year with 25-40 seats per offering at several non-UP locations.

Prerequisite: PSYCH 100

Changes Effective Spring 2020:

- Description
PSYCH 243: Introduction to Well-being and Positive Psychology (3 Credits) (BA) (GS)

Old Listing Effective Through Fall 2019:

Applying psychological knowledge to develop and maintain effective personal adjustment and well-being and positive social relations. PSYCH 243 Introduction to Well-being and Positive Psychology(3) (GS)(BA) This course meets the Bachelor of Arts degree requirements. The psychology of personal well-being and adjustment involves the application of the empirically derived principles of psychology to the problems of everyday behavior. As part of a scholarly discipline, scientific field, and professional activity, the overall focus of the course is the study of the psychological process of adapting to, coping with, and managing the problems, challenges, and demands of modern life. As an important area of psychological science, well-being and adjustment is an area of research in which investigators develop and systematically test theories about adjustment. As part of a profession, it involves the application of this empirically gained knowledge to enable people to respond to environmental pressures, both physical and psychological, and to cope with stress. This course provides an overview of the field of adjustment, including topics such as the way in which personality affects people's pattern of adjustment, the effect of stress on adjustment, the use of coping strategies to deal with stress, the adjustments people make in their social relationships (including how individuals view others, communication, behavior in groups, and intimate relationships), the development of gender roles, the emergence of sexuality, the phases of adult development, transitions in the world of work, and the way in which adjustment influences a person's psychological and physical wellness. Content is presented through a combination of lectures, readings, active learning activities, and demonstrations. Assessment is based on objective and essay exams taken in class, and on instructional and collaborative writing assignments (which include library and internet research, and a personal journal). Discussion and questions are encouraged in all sections. Along with personal contact, students have the opportunity to communicate with faculty members via e-mail. After taking this course students should be able to make more informed decisions about participating in future psychology courses and have a better understanding of adjustment psychology as a science, and the importance of adjustment in their own lives. Students will be evaluated on a combination of examinations, research projects and writing assignments. PSYCH 243 may be applied to the requirements of the Psychology BS and Psychology BA options and to the requirements of the Psychology minor. This course currently meets a General Education requirement in the Social and Behavioral Sciences. It is being offered once a year with 25 seats per offering at several campuses.

Prerequisite: PSYCH 100

Changes Effective Spring 2020:

- Description

PSYCH 253: Introduction to Psychology of Perception (3 Credits) (BA) (GS)

Old Listing Effective Through Fall 2019:

Survey of human perception and processing of perceptual information, with some reference to animal literature. Emphasizes vision and audition.

Prerequisites: PSYCH 100

Changes Effective Spring 2020:

- Description

PSYCH 256: Introduction to Cognitive Psychology (3 Credits) (BA) (GS)

Old Listing Effective Through Fall 2019:

Introduction to study of such higher mental processes as thinking and reasoning, imagery, concept formation, problem solving, and skilled performance. PSYCH 256 Introduction to Cognitive Psychology (3) (GS)(BA) This course meets the Bachelor of Arts degree requirements. This course is an introduction to cognition, an area of psychology that investigates the ways in which we acquire, store, create and use knowledge. Cognition includes a wide range of mental processes that are used every day in almost all human activities. These include attention, perception, memory, imagery, language, problem solving, creativity, and reasoning. Cognition refers to a theoretical approach in psychology that emphasizes the role of people's knowledge, reasoning, and expectations and this approach has had a broad influence on all areas of psychology. It also involves developing sophisticated methodologies to study processes that are not always observable. Cognitive research can be applied in order to improve mental functioning, e.g., developing programs for improving memory or cognitive rehabilitation for brain injury. It can also be used to address serious societal issues and problems such as understanding how people develop and use stereotypes. Cognitive psychology has applications to many fields including medicine, the legal system, education, and understanding mental disorders. In addition, cognitive psychology is part of the active interdisciplinary field of cognitive science that also includes disciplines such as philosophy, neuroscience and artificial intelligence. This course provides an overview of the field of cognitive psychology, including its research, theory, and application. Content is presented through a combination of lectures, readings, activities, and demonstrations. A major goal of the course is to show how the major questions in cognition are addressed through empirical research. It also promotes critical thinking and encourages students to apply this knowledge to enhance their lives. This course is a basic 200-level course for the psychology majors (PSYBA, PSHBA, PSHBS, APSCC, APSYC) at several campuses. It fulfills category c. cognitive/learning and psycholinguistics at University Park and category 3. cognitive/ experimental at Penn State Erie, Category b. developmental, cognitive, learning at Berks Lehigh Valley college and the Commonwealth College. It may be used to satisfy the Social Behavioral Sciences requirements. In large sections evaluation will be primarily based on objective, multiple-choice examinations. Individual instructors may supplement such examinations with other forms of evaluation as appropriate to section size and setting. In smaller sections the course evaluation may be supplemented with essay exams, laboratory projects and student presentations. This course will be offered twice a year with 100 to 125 seats per offering at University Park and once a year with smaller sections at other locations.

Prerequisite: PSYCH 100

Changes Effective Spring 2020:

- Description

PSYCH 261: Introduction to Psychology of Learning (3 Credits) (BA) (GS)

Old Listing Effective Through Fall 2019:

A general survey of the learning area, including animal and human experiments, with the applicability of learning principles being discussed.

- Description
The Russian people from the tenth century to present times; their literature, arts, music, science, and philosophy. In English. RUS 100 Russian Culture and Civilization (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. This course surveys Russia’s cultural past and present. Although it touches on aspects of Soviet culture, the main emphasis lies on what some people would call the “real Russian culture,” eclipsed for seventy years under the Communist regime and now about to be resurrected. At this crucial juncture in the history of Russia, the notion of a “real” culture remains highly problematic and controversial. The course surveys the various attitudes of Russian thinkers and authors towards the question of national identity and national destiny. Examples of Russian high culture (philosophy, literature, art, music) and the Russian religious faith (Orthodoxy) are discussed alongside with daily life in post-communist Russia. The course also includes some Russian films. A knowledge of Russian is not required. The course format consists of lectures, slide, video and audio presentations. Questions and discussion are strongly encouraged. At the end of the course, students will be familiar with the problems that Russia faces at the present time, they will have a summary knowledge of Russian history and geography, and will be acquainted with representative achievements of Russian high culture. Students are evaluated on the basis of four multiple choice exams, of which the lowest grade will be dropped (60% of course grade), and a research paper graded for both content and language (40% of course grade). Extra credit can be earned through class presentations, offering an opportunity for practice in public speaking, and by writing reaction papers about lectures offered by the Penn State Center for Russian and East European Studies, or appropriate extracurricular events (e.g., concerts of Russian music, exhibits of Russian art, etc.). As a General Education course, Russian 100 incorporates the following four elements of active learning: international competence (which is inherent in the subject matter), information gathering and analysis, active use of writing, and dialogue pertaining to social behavior, community, and scholarly conduct, which will be provoked by the reading material. Russian literature and culture is famous for raising the “big questions.” Vast in scope, unabashedly ambitious, nineteenth-century Russian literature aspired to nothing less than to teach its readers how to live. The failed communist experiment in the twentieth century raises poignant questions about the desirability and pitfalls of utopian social engineering. Students have to write a 10-page research paper on a topic previously agreed upon with the instructor. For this paper, they have to explore both electronic and print resources. The paper is graded for content, structure, and language. As an option for extra credit, students can volunteer a class presentation on their research topic. Recent presentations included, for example, a lecture on Russian rock music with sound samples and pictures downloaded from the internet, and a presentation on Russian composers of the futurist avant-garde.
of sustainability, we will discover the role of soil in mediating human-environment interactions by determining natural plant and animal abundance, supporting agriculture, and buffering the environment against modern pollution. The five themes of the class are: 1) The science of nature and the nature of science, which introduces students to the scientific method and value systems that affect environmental choices, 2) Population and consumption, where we consider these challenges to global sustainability, 3) the Malthusian dilemma of how we can feed billions of people in the near future, 4) the conservation dilemma of how we can maintain a healthy environment (while feeding billions of people), and 5) Success stories in sustainable environmental science and policy. The class will include "soils cases" in which examples from environmental soil science are used to convey principles of sustainability, and "sustainability walks" to see examples of sustainable environmental choices near campus. Students will complete the class with: 1) a survey of the key issues in global environmental sustainability, 2) exposure to current scientific information related to these issues, 3) an enhanced ability to interpret environmental data, 4) an increased knowledge of the role of soils in maintaining environmental quality, 5) an increased understanding of how environmental problems and solutions are global phenomena, requiring cooperation among many international cultures, and 6) a significant depth of knowledge about "what it takes" to feed 6.5 billion people while maintaining a healthy environment.

Changes Effective Spring 2020:

- Description
- Remove IL Designation

**SOILS 101: Introductory Soil Science (3 Credits) (BA) (GN)**

Old Listing Effective Through Fall 2019:

A study of soil properties and processes and relationships to land use, plant growth, environmental quality, and society. SOILS 101 Introductory Soil Science (3) (GN) This survey and foundational course introduces students to a broad range of subject matter from most sub-disciplines of soil science. We study a range of soil characteristics and seek to understand their relationship to soil function, land use, plant growth, environmental quality, and society/culture. This course introduces students to the variety and complexity of soils on a local, national, and international scale. We identify the physical, chemical, and biological properties and processes of soils and relate these to the way that societies use and abuse soils. Students acquire a working knowledge of the technical terminology of soil science and begin developing observational skills needed to describe and/or locate soil properties for specific locations and to interpret those properties for various uses. We learn to recognize and explain various land use and management practices and to select those that are appropriate at a given site. Students also evaluate the impact of land use and management decisions on agricultural productivity and sustainability, environmental and ecological health, and on community relationships. This course is required or on a list from which students select for many environmental and agricultural majors. It is specifically listed as a prerequisite for many other SOILS courses and for several soils-related courses taught at Penn State.

Changes Effective Spring 2020:

- Description

**SPAN 131: Ibero-American Civilization (3 Credits) (US) (IL) (BA) (GH)**

Old Listing Effective Through Fall 2019:

Spanish American and Brazilian life from the Conquest to the present; literature, art, the indigenous heritage, and contemporary problems.

**SPAN 131 Ibero American Civilization (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. The nations and peoples of Latin America have a unique, interesting history and cultural heritage that are rooted in the traditions, beliefs, experiences, values, and struggles of Native American, European, African and other populations. As close neighbors and major trading partners of the United States, Latin American republics have both benefited and suffered from the proximity and foreign policies of the northern capitalist democracy, and have contributed to its strength and growing ethno-racial diversity. This course aims to provide the student with a broad, general introduction to the lands, peoples, and history of Latin America; to inform the student about the region's ethnic diversity, cultural background, and problems of development; and to promote appreciation for the values and practices of other cultures, and a better understanding of relations between the nations of the region and the United States. Classes will usually combine lecture and discussion of reading assignments, with an expectation of high student participation. Films, videos, and recordings will enhance and illustrate readings. Three examinations (each covering approximately one third of the lessons presented), an occasional quiz, a book report or an annotated bibliography, participation and attendance will be the basis for evaluation of student learning and grades. Students are required and expected to read assignments, to attend class regularly, and to be prepared to participate in class discussions by answering and raising questions relevant to the lessons. Poor attendance will adversely affect a students standing and grade. This course will fulfill the Humanities Breadth and Cultural Diversity requirements. The course does not count toward credits in the major or minor in Spanish because it is taught in English. Nevertheless, it will complement the department's offerings by providing students with a greater appreciation of Latin America's cultural origins, socioeconomic development, and everyday realities. Overhead projector and screen will be needed as special facilities.

Changes Effective Spring 2020:

- Description

**SPAN 479: U.S. Latina/o Culture en Espanol (3 Credits) (US) (GH)**

Old Listing Effective Through Fall 2019:

The history, culture, art, and social issues of Latinos in the United States. SPAN (LTNST) 479 U.S. Latina/o Culture in Spanish (3) This is an overview of literature and culture, in Spanish, created within the United States. We will read fiction, essays and film, but also consider poetry, travel accounts, visual art and performances, and cultural practice and sociological issues (like “quinceañeras” and soccer leagues) in order to discuss some of the following themes particular to the Hispanic experience within the U.S.: immigration and transnationalism; the imaginary homeland; families and assimilation; conflicted identity; language and a sense of place. We will emphasize two basic tools of literary analysis: "close reading," and library research.

Cross-Listed Courses: LTNST 479

Prerequisite: SPAN 253W

Changes Effective Spring 2020:

- Description

Abbreviated Title
SSED 411: Teaching Secondary Social Studies I (3 Credits)
Old Listing Effective Through Fall 2019:

Methods for teaching social studies in secondary grades; nature of social studies, content and learning outcomes, instructional strategies, and planning. SS ED 411 Teaching Secondary Social Studies I (3) Teaching social studies in the secondary grades (7-12) with emphasis on content and methods for the major subjects (citizenship and government, economics, geography, and history). The principal goal is to provide prospective teachers with a better understanding of the nature, structure, and experience of social studies in the U.S., how to identify, select, instruct, and assess rigorous content and learning outcomes, and effective strategies for designing, planning, and implementing instruction. Additional topics may be included as determined by the section instructor.

Prerequisites: CI 295, ECON 104, GEOG 010, HIST 020, HIST 021, PL SC001; plus 6 credits of other Option Requirements (Prescribed Courses, Additions Courses, Supporting Courses and Related Areas, Concentration)

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

STAT 485: Intermediate R Statistical Programming Language (1 Credit)
Old Listing Effective Through Fall 2019:

Builds an understanding of the basic syntax and structure of the R language for statistical analysis and graphics. R is a popular tool for statistical analysis and research used by a growing number of data analysts inside corporations and academia. The flexibility and extensibility of R are keys attributes that have driven its adoption in a wide variety of fields. This course begins the application of statistical analyses by providing students with hands on experience implementing R in various regression and ANOVA contexts. In addition, data visualization options are considered for producing customized graphics and simple programming is learned. Documentation of work and report writing is also an important aspect of the course content.

Prerequisite: STAT 484

Changes Effective Spring 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses

STRING 101: Viola: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in viola one-half hour per week. STRING 101J Viola: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. This course is designed to introduce, define, and develop the musical and technical skills required to play the viola in a variety of musical contexts. Fundamentals of technique are addressed through the study of scales and other technical studies or etudes. These are then applied in various musical settings, including solo, chamber, and orchestral works. Students receive one-half hour of private instruction per week. The course is open to Music majors and non-majors and is offered every semester. Enrollment can range from 5-8 students per semester.

Changes Effective Spring 2020:

• Description

STRING 102: Violoncello: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in violoncello one-half hour per week. STRING 102J Violoncello: Secondary (1 per semester/maximum of 8) (GA) (BA) This course meets the Bachelor of Arts degree requirements. This course is designed to introduce, define, and develop the musical and technical skills required to play the violoncello in a variety of musical contexts. Fundamentals of technique are addressed through the study of scales and other technical studies or etudes. These are then applied in various musical settings, including solo, chamber, and orchestral works. Students receive one-half hour of private instruction per week. The course is open to Music majors and non-majors and is offered every semester. Enrollment can range from 8-10 students per semester.

Changes Effective Spring 2020:

• Description

STRING 103: Double Bass: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in double bass one-half hour per week. STRING 103J Double Bass: Secondary (1 per semester/maximum of 8) (GA) (BA) This course meets the Bachelor of Arts degree requirements. This course is designed to introduce, define, and develop the musical and technical skills required to play the double bass in a variety of musical contexts. Fundamentals of technique are addressed through the study of scales and other technical studies or etudes. These are then applied in various musical settings, including solo, chamber, and orchestral works. Students receive one-half hour of private instruction per week. The course is open to Music majors and non-majors and is offered every semester. Enrollment can range from 3-5 students per semester.

Changes Effective Spring 2020:

• Description
Strng 104: Guitar: Secondary (1 Credit: Maximum of 8 Credits) 
Old Listing Effective Through Fall 2019:

Individual instruction in guitar 1/2 hour per week. For School of Music majors whose primary instrument is not guitar; other qualified students. STRNG 104J Guitar: Secondary (1 per semester/maximum of 8) Individual instruction in guitar 1/2 hour per week. For music majors whose primary instrument is not guitar; other qualified students.

Changes Effective Spring 2020:

- Description
- Add GA Designation
- Add BA Arts Designation

Strng 110: Violin: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in violin one hour per week. STRNG 110J Violin: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. This course is designed to introduce, define, and develop the musical and technical skills required to play the violin in a variety of musical contexts. Fundamentals of technique are addressed through the study of scales and other technical studies or etudes. These are then applied in various musical settings, including solo, chamber, and orchestral works. The course is open to Music majors and nonmajors and is offered every semester. Enrollment can range from 4-6 students per semester.

Changes Effective Spring 2020:

- Description

Strng 111: Viola: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in viola one hour per week. STRNG 111J Viola: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. This course is designed to introduce, define, and develop the musical and technical skills required to play the viola in a variety of musical contexts. Fundamentals of technique are addressed through the study of scales and other technical studies or etudes. These are then applied in various musical settings, including solo, chamber, and orchestral works. The course is open to Music majors and nonmajors and is offered every semester. Enrollment can range from 3-5 students per semester.

Changes Effective Spring 2020:

- Description

Strng 112: Violoncello: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:

Individual instruction in violoncello one hour per week. STRNG 112J Violoncello: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. This course is designed to introduce, define, and develop the musical and technical skills required to play the violoncello in a variety of musical contexts. Fundamentals of technique are addressed through the study of scales and other technical studies or etudes. These are then applied in various musical settings, including solo, chamber, and orchestral works. The course is open to Music majors and nonmajors and is offered every semester. Enrollment can range from 3-5 students per semester.

Changes Effective Spring 2020:

- Description

Thea 472: Lighting Technology (3 Credits)
Old Listing Effective Through Fall 2019:

An introduction to the basics of electricity, dimmer protocols, lightboard programming, lighting paperwork, and master electrician & assistant lighting design practices. THEA 472 Lighting Technology (3)THEA 472 is an introduction to the basics of electricity, dimmer protocols, lightboard programming, lighting paperwork, and master electrician & assistant lighting design practices. This course will help prepare theatre designers to understand the inner workings of all of the equipment, working practices and safety requirements that are involved with the business of lighting design. This course will also provide students with many of the skills needed to get their foot in the door and get started in the business. Special attention will be paid to safety, stressing the need for safe working practices and environments over the need to get the show up no matter what. Students will learn how all of the advanced technology that is being introduced to the world of lighting functions and how these new technologies are all integrated into a functional system. Students will serve as master electricians and/or as assistant lighting designers as part of the hands-on production aspect of the class, with ample time devoted to process discussions and post-show critiques of the work. Small-group problem solving and system troubleshooting will be discussed in depth and applied to real production situations.
Prerequisite: THEA 270 or equivalent

Changes Effective Spring 2020:

• Prerequisite/Corequisite/Concurrent Courses

**VBSC 407: Dairy Herd Health Programs (2 Credits)**
Old Listing Effective Through Fall 2019:

A discussion of health programs for dairy herds to assist in the control of infectious and metabolic diseases of dairy animals. VB SC 407 Dairy Herd Health Programs (2) Dairy Herd Health Programs provides students interested in dairy farm management and/or herd health medicine the opportunity to integrate basic knowledge of dairy cattle diseases into a comprehensive and practical herd health program. Herd health management is discussed as it relates to infectious disease control including mastitis and calf diseases, reproductive management, metabolic disease control and parasite control. A text book is not required. Readings are provided via ANGEL and students are strongly encouraged to read current scientific and lay press literature in the appropriate subject areas.

Prerequisite: AN SC301, AN SC310, AN SC427, AN SC431W

Changes Effective Spring 2020:

• Credits
• Description
• Title
• Abbreviated Title
• Prerequisite/Corequisite/Concurrent Courses

**VOICE 100: Voice: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)**
Old Listing Effective Through Fall 2019:

Individual instruction in voice one-half hour per week. VOICE 100J Voice: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. This course is designed to present and apply basic principles of singing. Students learn songs, and address topics such as posture, breathing, tone production, expressiveness, and vocal health. Objectives are proficiency of breath management, a resonant vocal timbre, and effective communication in song. Evaluation is based on accuracy of music learning, improvement in expressiveness, and vocal health. Objectives are proficiency of breath management, a resonant vocal timbre, and effective communication in song. The course is offered every semester. The maximum enrollment is 3 per semester.

Changes Effective Spring 2020:

• Description

**VOICE 110: Voice: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**
Old Listing Effective Through Fall 2019:

Individual instruction in voice one hour per week. VOICE 110J Voice: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. This course is designed to present and apply basic principles of singing. Students learn songs, and address topics such as posture, breathing, tone production, expressiveness, and vocal health. Objectives are proficiency of breath management, a resonant vocal timbre, and effective communication in song. Evaluation is based on accuracy of music learning, improvement in technique and expressiveness, possible writing or listening assignments, and a possible studio recital. The course is offered every semester. The maximum enrollment is 3 per semester.

Changes Effective Spring 2020:

• Description

**WMNST 200: Global Feminisms (3 Credits) (IL) (BA) (GS)**
Old Listing Effective Through Fall 2019:

This course examines the diverse contents and forms of “feminism” worldwide, emphasizing women’s engagement with unequal, unjust, impacts of globalization. WMNST 200 Global Feminisms (3) (GS;IL) (BA) This course meets the Bachelor of Arts degree requirements. This course introduces students to the complexity of feminisms in the context of contemporary globalization. Much of the course focuses on the variety of feminist movement transnationally, particularly as those movements respond to not only local culture and politics, but also to global politics, and as such it touches again and again on the history of power. Explorations of the interaniting systems of power in a given area or region includes attention to ideologies of gender, race, sexuality, colonialism, imperialism, health and welfare, any or all of which are either supported or disrupted by globalization. The course holds a feminist lens to issues such as: gender and sexualities; the politics of the body; ongoing effects of colonialism—in theory and practice—on women worldwide; women’s health; women and the environment; women’s labor; political economy; transnational migrations; global class relations; women and/ in the media; violence against women; women and war; the global sex/ human trafficking trades; silence and marginalization; citizenship politics; women in politics and activism around the globe. The course examines contemporary feminist theory the so-called First World and or so-called Third World, highlighting the ways in which the term “feminism” continues to be contested. Given that we no longer talk about “feminism” in the singular in the United States, lack of agreement on the priorities of feminists worldwide is even more acute, given diverse cultural, political and economic positions of women around the globe. Thus the course also asks students to resist the kinds of generalizations that have led to inadequate feminist response to urgent challenges faced by women around the world. At the same time, the course will ask what kinds of connections can be made between local feminisms, and transnational feminist movement.

Changes Effective Spring 2020:

• Description

**WMNST 200H: Women’s Studies (3 Credits) (H)**
Old Listing Effective Through Fall 2019:

NO DESCRIPTION

Changes Effective Spring 2020:

• Description
• Title
• Abbreviated Title
• Number to 200U
• Add GS Designation
• Add IL Designation
• Add BA Other Cultures Designation
• Add BA Social and Behavioral Sciences Designation
WMNST 300: Latinas in the US: Gender Culture and Society (3 Credits) (US)
Old Listing Effective Through Fall 2019:
This course examines the historical development, theoretical premises, and political, social, and artistic contributions of Latina feminisms in the United States. WMNST (LTNST) 300 Latina Feminisms (3) (US) This course examines the historical development, theoretical premises, and political, social, and artistic contributions of Latina feminisms in the United States. It shows the connections to as well as the divergences from Latin American feminism by beginning with an analysis of how the Spanish conquest, the imposition of Catholicism, and subsequent years of colonialism shaped gender and sexual identities. It examines the contemporary effects of these historical issues and inquires into the common concerns of Latin American feminists and Latina feminists. It asks how theories and practices have diverged given different geographies, both between the U.S. and Latin America and within the U.S. The course then moves to the 1960s and 1970s in the U.S., when Chicano and Puerto Rican nationalist movements also gave rise to a feminist consciousness amongst Latinas; the conjuncture of race, ethnicity, gender, and sexuality is considered, with attention to how Latinas critiqued Anglo feminism's narrow focus on gender. The next unit focuses on family formations, considering social science and feminist discourse on the issues of patriarchy. How have Latina feminists valued yet also rearticulated the traditional family? What critiques have made been against heterosexism? How have lesbians and gays formulated new kinds of families? How does migration shape family relations? The final section of the course explores how Latina artists in different genres have responded to and resisted traditional gendered and sexual roles. Literature, film, performance art, and hip hop are all examined for their diverse representations of sexual desire

Cross-Listed Courses: LTNST 300
Prerequisite: LTNST 100 or WMNST 100

Changes Effective Spring 2020:

• Description

WMNST 364: Black & White Sexuality (3 Credits) (US) (GS)
Old Listing Effective Through Fall 2019:
This course explains how narrow ways of thinking limit our understanding of the diverse expressions of human sexuality.

Cross-Listed Courses: AFAM 364

Changes Effective Spring 2020:

• Description
• Number to 364N
• Cross-List Number to 364N
• Add Inter-Domain Designation

WWNDS 100: Flute: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:
Individual instruction in flute one-half hour per week. For both music and non-music majors. WWNDS 100J Flute: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, the development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

• Description

WWNDS 101: Oboe: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:
Individual instruction in oboe one-half hour per week. For both music and non-music students. WWNDS 101J OBOE: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, the development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

• Description

WWNDS 102: Clarinet: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)
Old Listing Effective Through Fall 2019:
Individual instruction in clarinet one-half hour per week. For both music and non-music students. WWNDS 102J Clarinet: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, the development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and
masterclasses, as assigned; acquisition of assigned materials (music, books, etc.); essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

- Description

**WWNDS 103: Bassoon: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in bassoon one-half hour per week. For both music and non-music majors. WWNDS 103J Bassoon: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.); essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission.

Changes Effective Spring 2020:

- Description

**WWNDS 104: Saxophone: Secondary (1 Credit: Maximum of 8 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in saxophone one-half hour per week. For both music and non-music majors. WWNDS 104J Saxophone: Secondary (1 per semester/maximum of 8) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

- Description

**WWNDS 110: Flute: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in flute one hour per week. For both music and non-music majors. WWNDS 110J Flute: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

- Description

**WWNDS 111: Oboe: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in oboe one hour per week. For both music and non-music students. WWNDS 111J OBOE: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

- Description

**WWNDS 112: Clarinet: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in clarinet one hour per week. For both music and non-music students. WWNDS 112J Clarinet: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.
masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

• Description

**WWNDS 113: Bassoon: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in bassoon one hour per week. For both music and non-music majors. WWNDS 113J Bassoon: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission.

Changes Effective Spring 2020:

• Description

**WWNDS 114: Saxophone: Secondary (2 Credits: Maximum of 16 Credits) (BA) (GA)**

Old Listing Effective Through Fall 2019:

Individual instruction in saxophone one hour per week. For both music and non-music majors. WWNDS 114J Saxophone: Secondary (2 per semester/maximum of 16) (GA)(BA) This course meets the Bachelor of Arts degree requirements. Individualized instruction will guide the student toward mastery of the instrument, the study of repertoire, development of interpretive insights, and acquisition of both tonal and technical command. Skill building will enable the student to be active as a performer, participating in Penn State ensembles by competitive audition. Evaluation of the student’s progress will be graded by the instructor according to the criteria stated in the course syllabus and will include: preparation of weekly assignments; solo and/or ensemble performances as assigned; attendance at recitals, concerts, and masterclasses, as assigned; acquisition of assigned materials (music, books, etc.), essential accessories (metronome, tuner, etc.); attendance at lessons (as stipulated in the course syllabus). The course is offered fall and spring semesters by permission of the instructor, depending on studio enrollments and availability of staff.

Changes Effective Spring 2020:

• Description

**Courses Dropped: Effective Summer 2020**

• AAAS 445H: Politics of Affirmative Action
• ACCTG 489: Seminar in Accounting
• AE 474: Building Construction Estimating
• AE 486: Professional Engineering Practice
• AEE 434: Agricultural and Environmental Development
• AERSP 498: Special Topics
• AET 210: Architectural Engineering Office Practice Using Writing Skills
• AET 212: Building Lighting and Electrical Layout
• AG 301: Introduction to Agricultural Law
• AGBM 220: Agribusiness Sales and Marketing
• AGECO 490: Agroecology Colloquium
• AGED 401B: Farm Machinery
• AGRO 490: Colloquium
• AMST 462: American Art and Architecture of the 20th Century
• ANSC 37: Horse and Man
• ANTH 440: South American Tribal Societies
• ANTH 471: Biology, Evolution, and Society
• ARCH 198: Special Topics
• ARCH 417: The Language of Boundaries in Architecture and the Landscape
• ARCH 492: Architectural Design Studio
• ARCH 498: Special Topics
• ART 447: Photo Based Printmaking
• ARTH 424: Masters of Northern Baroque Art
• ARTH 425: Topics in Northern Renaissance Art
• BA 304H: Honors Core Management
• BBH 19: Health and Disease
• BESC 408: Group Facilitation and Leadership Skills
• BIOE 100T: Bioengineering Seminar
• BIOL 223: Laboratory in Genetics
• BMB 437: Physiological Biochemistry
• CHEM 445: Atomic and Molecular Spectroscopy Laboratory
• CJ 450M: Criminal Justice Policy
• CMPEN 472H: Honors Microprocessors and Embedded Systems
• CMPSC 109: Introduction to Data Processing with COBOL
• CMPSC 402: UNIX and C
• CMPSC 452: Numerical Analysis
• CMPSC 498: Special Topics
• COMM 120: Advertising and Society
• COMM 413: The Mass Media and the Public
• COMM 470H: Convergent Media News Service: Newspaper Production
• COMM 485: Analysis of Broadcast-Cable Policy
• CRIMJ 83S: First-Year Seminar in Criminal Justice
• CRIMJ 300: Honors Seminar: Issues and Trends in Criminal Justice
• CRIMJ 490M: Seminar in Criminal Justice
• CWC 298: Special Topics
• ECON 406W: The Economics of Social Conflict
• ECON 463W: Economic Demography
• ECON 465W: Cross Sectional Econometrics
• ECON 473: China in the Global Economy: History, Culture, and Society
• ED 100T: First-Year Seminar in Education
• ED 433: Advanced Theory of Kindergarten
• EDUC 401: Early Childhood Education
• EDUC 462: Computers for Classroom Teachers
• EE 439: Radiowave Propagation in Communications
• EET 206: Semiconductor Laboratory
• EET 210: Fundamentals of Semiconductors
• EET 216: Linear Electronic Circuits
• EET 216H: Linear Electronic Circuits
• EET 221: Linear Electronics Laboratory
• EET 458: Digital Signal Processing
• EGT 101: Technical Drawing Fundamentals
• ELED 400: Schools, Families and Communities
• ELED 401A: Teaching Reading in Multicultural Elementary Schools
• ELED 401B: Teaching Language Arts in Multicultural Elementary Schools
• ELED 401C: Teaching Children's Literature in Multicultural Elementary Schools
• ELED 402: Teaching and Assessment in Multicultural Elementary Schools
• ELED 403: Using Science and Mathematics Knowledge and Assessment in Urban Settings
• ELED 401H: Teaching Reading in Multicultural Elementary Schools
• ELISH 429M: Fiction Workshop
• EMCH 213D: Strength of Materials with Design
• ENGL 184S: The Short Story
• ENGL 298: Special Topics
• ENGL 311: The Canon and Its Critics
• ENGL 439: Business or Technical Writing Practicum
• ENGL 479: The Folk tale in American Literature
• ENGR 201: Structures and Society
• ENT 445: Evolution of Insect Societies
• ENVE 301: Environmental Microbiology
• ENVE 413: Operation and Control of Treatment Systems
• ET 2: Engineering Technology Orientation
• FIN 305H: Financial Management of the Business Enterprise
• FIN 305H: Business and the Liberal Arts
• FIN 481: Advanced Financial Analysis
• FIN 481: Seminar in Finance
• GEOG 130: Environment, Power, and Justice
• GEOG 498: Special Topics
• GEOG 498: Special Topics
• GEG 301: Environmental Microbiology
• GEG 413: Operation and Control of Treatment Systems
• ELISH 429M: Fiction Workshop
• GEG 428: Political Geography
• GEG 498: Acquiring and Integrating Geospatial Data
• GEOEC 40L: The Sea Around Us
• GECO 40P: The Sea Around Us
• GEOL 71: Physical Geology for Engineers
• GER 195: Modern German Drama and Theatre in English Translation
• GREEK 1: Elementary Classical and New Testament Greek
• HDFS 218: Foundations of Marriage
• HDFS 302B: Leadership and Technology Skills for Human Services Professionals B
• HDFS 302H: Leadership and Technology Skills for Human Services Professionals A
• HDFS 425: Work as a Context for Human Development
• HDFS 468: Biological Bases of Behavioral Development
• HIST 119: Gender and History
• HIST 235: The Church and the Jews
• HIST 300C: Independent Study
• HIST 422: Religion and American Culture
• HORT 390: Junior Seminar
• HORT 450: Greenhouse Management
• IE 462: Introduction to Expert Systems
• IE 463: Computer Aided Design and Manufacturing
• IE 469: Global Industrial Engineering Experience
• IET 109: Inspection and Quality Control
• IET 402: Production Management
• INSC 463: Languages of the Web
• INTAG 481: Problems in Agriculture in Tropical Areas
• IST 255: Fundamentals of Web Administration
• IST 257: Advanced Web Administration
• IST 341: Human Diversity in the Global Information Economy
• IST 443: IT Professional Services Theory and Practice
• IST 444: Advanced IT Professional Services
• IT 230: Masterpieces of Italian Literature in English Translation
• LA 100: Contemporary Legal Issues
• LA 198: Special Topics
• LA 200: Business and the Liberal Arts
• LING 198: Special Topics
• LING 498: Special Topics
• LST 100: Information Search Strategy
• MAET 201: Introduction to Materials Engineering Technology
• MAET 202: Materials Testing
• MAET 203: Introduction to Powder Metallurgy
• MAET 205: Powder Metallurgy Laboratory
• MAT 431: Linear Algebra and Discrete Models II
• MAT 498: Special Topics
• MAT 91: Polymers, Life and Society
• MAT 444: Solid State Properties of Polymeric Materials
• MAT 472: Metallurgy Laboratory II
• MAT 474: Polymeric Materials Laboratory–Characterization
• MD 347: Computer-Aided Engineering
• MET 281: Elementary Thermo- and Fluid Dynamics
• METEO 200A: Introduction to Weather Analysis I
• METEO 200B: Introduction to Weather Analysis II
• METEO 418: Topics in Mesoscale Meteorology
• METEO 471: Observing Meteorological Phenomena
• MGMT 150: Supervisory Management
• MICRB 498: Special Topics
• MIS 434: Internet Technologies
• MIS 442: Business Information Systems Design
• MIS 470: Advanced Applications Development
• MNGT 30: Introduction to Mining Technology
• MNGT 203: Introduction to Strata Control
• MTHBD 315H: Applied Modern Algebra I
• MUSIC 5S: An Introduction to Western Music
• MUSIC 298: Special Topics
• NURS 455: Novice Nurse Residency I
Using this Bulletin

- NURS 462: Psychotropic Drugs and Children/Adolescents
- NURS 467: Medication Update and Health Teaching Interventions for School Nurses
- NURS 471: Issues in Bullying for Health Professionals
- NUTR 111: Introduction to U.S. Food History
- NUTR 430: Global Food Strategies: Problems and Prospects for Reducing World Hunger
- OT 401: Conceptual Foundations of Occupational Therapy and Occupational Adaptations
- OT 410: Environmental and Technological Influences on Occupational Adaptation and Performance
- OT 411: Occupational Therapy Management and Professional Ethics
- PHIL 10S: Critical Thinking
- PHIL 498: Special topics
- PHYS 461: Theoretical Mechanics
- PLET 430: Packaging Design & Materials
- PLET 462: Advanced Injection Molding
- PLSC 137: United States Intelligence and Policy Making
- PLSC 411: Principles of International Cooperation
- PLSC 415: International Organization: Political and Security Functions
- PLSC 417: American Local Government and Administration
- PNG 489: Engineering Evaluation of Oil and Gas Properties
- PSU 9T: First-Year Seminar Communications
- PSYC 301: Health Psychology
- PSYCH 405: Mathematical Psychology
- PSYCH 450: Psychology of Consciousness
- PSYCH 459: Attention and Information Processing
- PUBPL 485: Seminar in Welfare Policy
- QC 460: Introduction to Six Sigma
- REHAB 413M: Rehabilitation Case Recording and Management
- RLST 408: Hindu Studies
- RLST 412: American Judaism
- RLST 440: The Orthodox Christian Tradition
- RUS 427: Tolstoy
- SCM 410: Introduction to Operations Management
- SCM 400: Transport Planning
- SOC 55: Work in Modern Society
- SOC 309: Sociology of Health
- SOC 420: Energy and Modern Society
- SPLED 431: Evidenced-Based Methods for Monitoring Student Progress and Making Instructional Decisions
- SPLED 433: Effective and Explicit Instruction for Students with Learning Difficulties
- SPLED 434A: Evidence-Based Practices for Inclusive Elementary Classrooms
- SPLED 444: Inclusive Education and Assessment
- SPLED 460A: Fundamentals of Reading Instruction in Special Education
- SPLED 460B: Teaching and Assessing Reading Skills of Students with Special Needs
- SPLED 460C: Specialized Reading Applications in Special Education
- THEA 170: Introduction to Stage Lighting Production Techniques
- THEA 180: Introduction to Stagecraft
- THEA 208S: Workshop: Theatre in Diverse Cultures
- TURF 489: Supervised Experience in College Teaching
- WFS 440: Natural Resources Public Relations
- WP 337: Wood Technology
- WP 412: Wood in Structures
- WP 418: Chemical Processing of Wood
- WP 437M: Wood Industries Marketing Management

Course Changes: Effective Summer 2020

AA 310: Creative Collaboration Studio (3 Credits)

Old Listing Effective Through Spring 2020:

Provides students with an advanced studio exploration of interdisciplinary collaborative projects in the digital arts and design disciplines. A&A 310 Creative Collaboration Studio (3) This course is the third required studio course for students in the Interdisciplinary Digital Studio (IDS) degree program. Students in A&A 310 will create advanced studio work that investigates, from a variety of disciplinary understandings, increasingly complex issues and problems in the arts and design disciplines. The course will emphasize collaborative and team-based projects, exploring the creative potential within the group dynamic as well as in relation to a client. This rigorous and focused exploration will result in a portfolio of completed and fully realized studio-based projects. This final portfolio will be made available online by the student, both to reach as broad an audience as possible as well as encourage the growth of a critically focused community of similarly interested practitioners in the digital arts and design disciplines. The primary purpose of the course is to bring together students engaged in a wide range of studio explorations and create a synergistic group dynamic that will inform and advance the work of all participants; hence, personal initiative and strong self-learning skills are a given expectation. The studio format is the fundamental model for education within the arts and design disciplines in the University. Ways of learning about the arts and design through projects and assignments that incorporate various technologies will be included in the course. This course also will give students knowledge of the digital arts and design disciplines, develop skills of art, design and communication, and foster a capacity for judgment. There will be an emphasis on both product and process necessitating high level of self-motivation and initiative. Each student will be encouraged to be open to a diverse range of ideas, values and solutions.

Prerequisite: A&A 210, ART 211W

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Abbreviation to DART
- Number to 301
- Credits from 3 to 4

AERSP 423: Introduction to Numerical Methods in Fluid Dynamics (3 Credits)

Old Listing Effective Through Spring 2020:

Finite difference methods applied to solving viscid/inviscid fluid dynamics problems, error control, numerical stability.

Prerequisite: AERSP312 or M E 320; MATH 250 or MATH 251; CMPSC201 or CMPSC202
focuses on creative work that is exploratory and experimental and experiences such as animations, interfaces and games. This course programming fundamentals for the production of expressive interactive FOR VISUAL ARTISTS AND DESIGNERS introduces object-oriented programming fundamentals for the production of expressive interactive experiences such as animations, interfaces and games. This course offers a series of scripting exercises in which students learn to develop applications using both a top-down and bottom-up design process. Students also develop a series of more ambitious computational projects using an iterative design process. They produce detailed design treatments and working prototypes before turning in final applications developed using an object-oriented programming language.

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Add Cross-Listed Course ME 423

AGBM 170Z: Investigating the U.S. Food System: How food moves from field to table -LINKED (3 Credits) (US) (GS)
Old Listing Effective Through Spring 2020:

The American food system is a product of complex interaction of three systems: the natural ecosystem, the managed agricultural system, and the socio-economic system. Farming, food processing, food distribution, and consumption decisions are all governed by the interaction of these systems. Consequences of these decisions, along with the interactions themselves, have generated a number of overarching scientific and social "hot-button" topics that affect or are affected by the food system such as genetically modified organisms (GMOS), organic crops and food, agricultural and food policy, environmental implications from agriculture food safety, food safety, diet and health, agricultural trade and international development, and domestic food insecurity and food access. Students in this course will investigate and discuss all of these topics by reading both popular press accounts and peer-reviewed academic research, and by hearing guest speakers from a variety of fields and academic disciplines. However, to provide additional relevance, the course will use specific foods or crops to provide a more concrete examination of these topics. For a wide range of foods and crops grown in or imported to the U.S, students will learn the following: 1. Where many of our crops are grown and why. 2. How labor intensive, chemical-intensive, biotechnology intensive, and equipment intensive many of our crops are. 3. What U.S. policies affect production, distribution, and consumption of many crops and food. 4. How large agribusiness companies may influence our crops' production, distribution, and consumption. 5. How consumer groups may influence our crops’ production, distribution, and consumption. And, 6. Whether or not alternative production and marketing systems exist for many crops. AGBM 170Z is linked to NUTR 175Z

Prerequisite or Concurrent: NUTR 175Z

Changes Effective Summer 2020:

- Prerequisite/Corequisite/Concurrent Courses

ART 200: Scripting Fundamentals for Visual Artists and Designers (3 Credits: Maximum of 3 Credits)
Old Listing Effective Through Spring 2020:

This course introduces object-oriented programming fundamentals for the production of expressive interactive experiences such as animations, interfaces and games. ART 200 SCRIPTING FUNDAMENTALS FOR VISUAL ARTISTS AND DESIGNERS introduces object-oriented programming fundamentals for the production of expressive interactive experiences such as animations, interfaces and games. This course focuses on creative work that is exploratory and experimental and engages students in research methods to advance their skills and critical competence in new media. Students apply computation concepts based on readings and discussions of key texts about interactive design, media art, and game design to the creation of original interactive projects. The course offers a series of scripting exercises in which students learn to develop applications using both a top-down and bottom-up design process. Students also develop a series of more ambitious computational projects using an iterative design process. They produce detailed design treatments and working prototypes before turning in final applications developed using an object-oriented programming language.

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Credits
- Abbreviation to DART
- Number to 205
- Add BA Arts
- Title
- Abbreviated Title

ART 314: Computer 3-D: Modeling, Rendering, and Animation (4 Credits: Maximum of 12 Credits) (BA)
Old Listing Effective Through Spring 2020:

A studio course introducing 3-d computer generated artwork and content creation using modeling, rendering, and animation applications on the computer. ART 314 Computer 3-D: Modeling, Rendering, and Animation (4 per semester/maximum of 12) This is a studio course introducing 3-D computer generated artwork and content creation using modeling, rendering, and animation applications on the computer. This course will provide students with an in-depth understanding of 3-D techniques and production strategies for the visual and new media artist through technical exercises and creative exploration of the medium. The course will seek to introduce students to a wide range of digitally generated 3-D based creative work and concentrate on producing and integrating 3-D modeled, rendered, and/or animated work into new media and studio art practice. This course will explore the nature and potential of digitally generated 3-D artworks through lectures, readings, demonstrations, studio practice, and critiques. Assignments will cover a range of applications used in 3-D studio production. This course will culminate in the creation of a series of original 3-D generated artworks.

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

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Credits
- Abbreviation to DART
- Number to 303
- Title
- Abbreviated Title

ART 415: Integrating Media: Convergence in Practice (4 Credits: Maximum of 12 Credits) (BA)
Old Listing Effective Through Spring 2020:
A studio course concentrating on the integration of new media technologies in contemporary art practice. ART 415 Integrating Media: Convergence in Practice (4)(BA) This course meets the Bachelor of Arts degree requirements. This course will concentrate on the integration of technologies into contemporary studio art practice. Emphasis will be placed on the convergence of digital, interactive, and time-based experiences within current studio practice. Assignments will cover a range of digital multimedia applications in sound, image, motion, interactivity, interface design, and media authoring. The course will culminate in a final large-scale collaborative media project, group show, installation, video screening, and/or class web presentation. This course will be offered fall and spring semesters.

Prerequisite: ART 315

Changes Effective Summer 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses
• Abbreviation to DART
• Number to 410

ART 416: Advanced Web and Net Art: Multimedia Publishing (4 Credits: Maximum of 12 Credits) (BA)
Old Listing Effective Through Spring 2020:

A studio course concentrating on multimedia online "net art" practice and Web publishing. ART 416 Advanced Web and Net Art: Multimedia Publishing (4 per semester/maximum of 12)(BA) This course meets the Bachelor of Arts degree requirements. This is a studio art class that focuses on creating, authoring, exhibiting, and discussion online art practice. "Net Art" has become an important form of new media art creation and exhibition. The course explores experimental uses of new media in the visual arts with emphasis on integrating net art and design practice in cyberspace with current studio practices in two, three, and four (time based) dimensional art. In addition to the actual creation of new media artworks, the course will engage students in research methods to advance their skills in new media art and design and help them to develop an understanding of the critical evaluation and assessment of new media artworks created specifically for the web. The course will also explore various methods and strategies for exhibiting and publishing artworks on the web and creating online portfolios. The course will examine and explore the potentials of net-based art through lectures, readings, demonstrations, creative practice in studio, critiques, and actual web-published exhibitions. Assignments will cover a range of digital multimedia applications in sound, image, motion, interactivity, interface design, and media authoring. The course will culminate in an online exhibition and personal portfolio sites published on the web.

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

Changes Effective Summer 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses
• Credits
• Abbreviation to DART
• Number to 406
• Title
• Abbreviated Title

ART 419: Advanced New Media: Capstone (4 Credits: Maximum of 8 Credits)
Old Listing Effective Through Spring 2020:

A new media and digital arts capstone course concentrating on the integration of art and technology in advanced thesis projects. ART 419 Advanced New Media: Capstone (4 per semester/maximum of 8) This is an advanced senior level capstone experience for new media. The course concentrates on advanced media theory and discourse, the integration of new media technologies into contemporary studio art and design practice, and on the creation and documenting of senior thesis projects. The course will focus on the final preparation of professional portfolios. The course will follow a studio/seminar model. Student thesis projects may cover a range of digital multimedia applications in sound, image, motion, interactivity, interface design, 2D, 3D, 4D media authoring, etc. in relation to their focus in new media art and design practice.

Prerequisite: ART 315 , ART 203 or ART 416 , and 12 credits of 300/400-level new media, senior or graduate standing

Changes Effective Summer 2020:

• Description
• Prerequisite/Corequisite/Concurrent Courses
• Abbreviation to DART
• Number to 411

ARTH 307: American Art (3 Credits) (US) (BA) (GA)
Old Listing Effective Through Spring 2020:

History of art in the English colonies and the United States from the seventeenth century to the present. AMST 307 / ARTH 307 American Art (3) (GA,US)(BA) This course meets the Bachelor of Arts degree requirements. American art, from the colonial period to the present, is examined through paintings, sculpture, buildings, prints and photographs, as well as exhibitions and national/world fairs. The class places special emphasis upon the predicament of national identity by examining the ways in which the very notion of the "American" has historically been highly contested. Special points of emphasis include: negotiations between indigenous, colonial and European artistic styles, representations of and by displaced populations (colonial subjects, Native Americans, African Americans), myths of the American landscape, the cult of domesticity and the gendering of American citizenry, later transatlantic experiences of expatriate artists, conflicts between urban and rural conceptualizations of the "typical" American experience, the role of the American avant-garde after World War II, and debates over federal funding for the arts. The course is designed to meet two principal goals. The first is to increase students' powers of visual analysis and help them build a critical vocabulary for discussing an art object's medium, composition, style, and iconography. The second is to foster an understanding of the deep implication of the visual arts in their social and cultural contexts. The course therefore involves significant material relating to political, economic and religious issues. It investigates problems in patronage, function, reception and censorship. It considers such intra- and cross-cultural issues as representations of gender. Requirements include essay exams and at least one paper. As a general education course in the arts, this course provides an introduction to American art to a student of any major. This course has no prerequisite and presumes no prior exposure to fine art. Students majoring in Art History will learn both the common vocabulary of the field and the outlines of the field that form the foundation for the future study.
ASTRO 1: Astronomical Universe (3 Credits) (BA) (GN)
Old Listing Effective Through Spring 2020:

The development of modern understanding of the astronomical universe from planets and stars to galaxies and cosmology. Student who have passed ASTRO 005, ASTRO 006, or ASTRO 010 may not take this course for credit. ASTRO 001 Astronomical Universe (3) (GN)(BA) This course meets the Bachelor of Arts degree requirements. ASTRO 001 is an introductory course for non-science majors. It provides a broad introduction to Astronomy including the historical development of the subject, basic physics of gravity, light, and atoms; telescopes; planets, moons, and other objects in our solar system; exosolar planets; the Sun and other stars; the evolution of stars; the Milky Way galaxy and other galaxies; distant quasars and other active galaxies; the expanding universe; cosmology based on the Big Bang theory; and life in the universe. The goal of this course is to cover most of the areas of modern astronomy at a level which requires only basic mathematics.

Changes Effective Summer 2020:

- Description

ASTRO 1H: Astronomical Universe (3 Credits) (H) (BA)
Old Listing Effective Through Spring 2020:

The development of modern understanding of the astronomical universe from planets and stars to galaxies and cosmology. Students who have passed ASTRO 005, ASTRO 006, or ASTRO 010 may not take this course for credit. ASTRO 001H Astronomical Universe (3) (GN)(BA) This course meets the Bachelor of Arts degree requirements. ASTRO 001H is an introductory course for non-science majors. It provides a broad introduction to Astronomy including the historical development of the subject, basic physics of gravity, light, and atoms; telescopes; planets, moons, and other objects in our solar system; exosolar planets; the Sun and other stars; the evolution of stars; the Milky Way galaxy and other galaxies; distant quasars and other active galaxies; the expanding universe; cosmology based on the Big Bang theory; and life in the universe. The goal of this course is to cover most of the areas of modern astronomy at a level which requires only basic mathematics.

Changes Effective Summer 2020:

- Description

ASTRO 6: Stars, Galaxies, and the Universe (3 Credits) (GN)
Old Listing Effective Through Spring 2020:

The development of our modern understanding of stars, galaxies, and the astronomical universe. Students who have passed ASTRO 001 or ASTRO 010 may not take this course for credit. ASTRO 006 Stars, Galaxies, and the Universe (3) (GN)ASTRO 006 will introduce students to the laws of nature as they apply to the study of stars, galaxies and the universe. During the semester, they will learn about gravitational forces, the nature of light and spectra, the different telescopes and instruments used to study the universe, new discoveries about our Sun and other stars, the births and deaths of stars, the structure of our own Milky Way galaxy, types of galaxies, how other nearby galaxies affect the Milky Way, the origin of our universe and the techniques that we have used to learn about our universe. These topics will be enhanced by numerous images and movies of our Sun and other astronomical objects that were collected with telescopes like the Hubble Space Telescope, the Swift gamma ray burst explorer, the Chandra X-ray telescope, the Solar and Heliospheric Observatory (SOHO), as well as other state-of-the-art instruments.

Changes Effective Summer 2020:

- Description

ASTRO 10: Elementary Astronomy (2 Credits) (BA) (GN)
Old Listing Effective Through Spring 2020:

Introductory survey of modern astronomy from planets and stars to galaxies and the universe. Students who have passed ASTRO 001, ASTRO 005, or ASTRO 006 may not take this course for credit. Students may not receive General Education credit for ASTRO 010 unless they also take ASTRO 011. ASTRO 010 Elementary Astronomy (2) (GN) (BA) This course meets the Bachelor of Arts degree requirements. ASTRT0 010 provides the 2 credit lecture component of a one-semester overview of modern astronomy. The class covers a wide range of topics in planetary, stellar, galactic, and extragalactic astronomy and cosmology. The level is appropriate for students with no university-level science background. The instructor makes frequent use of dramatic images of astronomical objects, demonstrations, and computer simulations. Profound themes underlie the content of the course: how the physical structure and evolution of the universe appears to be ruled by deterministic mathematical laws; how our understanding of the universe progresses by the intricate interplay between theory and observations; how we, as living organisms on a well-placed planet, appear to be both an intimate part of yet an unusual occurrence within the universe. The student will gain perspective on his or her place in a vast and stunningly beautiful universe.

Changes Effective Summer 2020:

- Description

BA 442: Sustainable Behavior of Consumers, Firms, and Societies (3 Credits)
Old Listing Effective Through Spring 2020:

Strategies to influence sustainable behavior considering consumer response and marketing communications. B A 442 Sustainability Behavior of Consumers, Firms, and Societies (3) Sustainability is a broad domain concerning the extent to which environmental, economic, and social practices are viable for current and future generations. Consumer awareness of sustainability issues has evolved from an emerging social movement to mainstream values, but increasing sustainable behavior remains a challenge. This course is designed to provide students with the knowledge to enhance sustainable behaviors in firms, among consumers, and in society at large. In doing so, this course will include frameworks for understanding how to influence sustainable practices, consumer response to sustainability, and marketing communication issues as well as real-world examples of sustainable practices and issues, offering both a theoretical and applied approach. The course may also include a project which will entail student teams working on a real-world sustainable
behavior problem in collaboration with a business or segment of the university campus when available or other course project addressing a relevant sustainability issue. Students should leave the course with an understanding of sustainability issues in the current marketplace and the knowledge and ability to influence sustainable behaviors. Students will enter their career with the knowledge and skills to be a sustainable business decision-maker and foster sustainable behavior.

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Add Cross-Listing MKTG 442

CAMS 110: Hebrew Bible: Old Testament (3 Credits) (US) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:

Introduction to the history, literature, and religion of ancient Israel. RLST 110 / CAMS 110 / JST 110 Hebrew Bible: Old Testament (3) (GH;US;IL) (BA) This course meets the Bachelor of Arts degree requirements. The Hebrew Bible is the record of the interaction between the people of ancient Israel and their God. As a religious text, the Bible is inextricably intertwined with the cultures of Israel's neighbors, including the Canaanites, Syrians, Greeks, Assyrians, Babylonians, Arabs, Egyptians, and the peoples of the eastern desert. To study the Hebrew Bible and its development during the first millennium BCE is to study the history, culture, and literature of the entire region. Hebrew Bible introduces students to the literature of ancient Israel, its rituals, the stories which established a people's identity, and which defined their moral behavior. Great figures of the texts, such as Moses, David, Solomon, Bathsheba, Ruth, Jeremiah, Daniel, and Ezra, teach us important lessons about life and how people of faith attempted to relate to one another, to God, and to people outside their ethnic group. Students will read from the text and from a textbook which contains scholarly opinion from a variety of sources. Recent archaeological and epigraphical studies will be incorporated into the course to enhance our work. The ultimate goal will be to assess the meaning of the texts in their ancient Near Eastern environment, and to understand the development of Hebrew religion and the beginnings of Rabbinic Judaism. Students will be evaluated using an hour examination, a 6-8 pp. "hermeneutical essay," a final examination, class attendance and discussion. As an introduction to the scriptures of the Hebrew Bible / Old Testament, RLST 110 / CAMS 110 / JST 110 utilizes the methodologies used in the academic study of religion. The course is related to many courses in religious studies which use these same methods or which are related to the history and development of Judaism, Christianity, or Islam. RLST 110 / CAMS 110 / JST 110 may be used to fulfill requirements for the Religious Studies major. RLST 110 / CAMS 110 / JST 110 may also be used to fulfill the GI or GH requirements in the major or minor in Religious Studies, Classics and Ancient Mediterranean Studies and Jewish Studies.

Cross-Listed Courses: JST 110 RLST 110

Changes Effective Summer 2020:

- Description
- Title
- Abbreviated Title
- Remove US Designation

CAMS 160: Sacrifice in Ancient Religions (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:

Examines theories of sacrifice and its manifestations in especially the religions of the ancient Mediterranean world and the Near East. RL ST (CAMS/J ST) 160 Sacrifice in Ancient Religions (3) (GH;IL) (BA) This course meets the Bachelor of Arts degree requirements. Sacrifice (from Latin sacer “holy” + facere “to make”) is one of the most prominent and troubling aspects of religion, in that it involves making an offering or slaughtering an animal to a deity. Its destruction and violence is often at odds with other rituals and core understandings within a religion, so why is it done and what good does it bring? This course will first examine some competing definitions and theories of sacrifice, and then turn to its manifestations in the ancient societies and religions of Greece, Rome, Egypt, Mesopotamia, Israel/Palestine (along with its neighbors Hatti and Phoenicia), as well as some examples from outside the Mediterranean world and the Near East, such as Mesoamerica or Vedic religion.

Cross-Listed Courses: JST 160 RLST 160

Changes Effective Summer 2020:

- Description
- Title
- Abbreviated Title

CAS 283: Communication and Information Technology I (3 Credits) (GS)
Old Listing Effective Through Spring 2020:

Introduction to communication technology and information management; intended for students in the Liberal Arts.

Changes Effective Summer 2020:

- Description

CHEM 111: Experimental Chemistry I (1 Credit) (BA)
Old Listing Effective Through Spring 2020:

Introduction to quantitative experimentation in chemistry. CHEM 111 Experimental Chemistry I (1) (GN) (BA) This course meets the Bachelor of Arts degree requirements. CHEM 111 is a one-credit introductory general chemistry laboratory. It is designed to complement the lecture course CHEM 110. The students are introduced to laboratory safety and good experimental technique, how to keep a proper laboratory notebook, interpret data, and write a formal report. The course introduces laboratory experimentation in the context of a variety of specific topics, such as reactions in solutions, spectroscopy, chemistry of natural waters, acids and bases, and the synthesis and analysis of chemical compounds. GN credit for CHEM 111 requires that CHEM 106 or CHEM 110 or CHEM 110H also be completed.

Concurrent Courses: Enforced Prerequisite or Concurrent: CHEM 110 or CHEM 110H or CHEM 106

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

CHEM 113: Experimental Chemistry II (1 Credit) (BA) (GN)
Old Listing Effective Through Spring 2020:
Continuation of CHEM 111, with emphasis on topics related to CHEM 112. CHEM 113 Experimental Chemistry II (1) (GN)(BA) This course meets the Bachelor of Arts degree requirements. CHEM 113 is a second-semester, one-credit introductory general chemistry laboratory course meant to complement the lecture course CHEM 112. The course builds on material learned in CHEM 111 with emphasis on quantitative analytical procedures. Essential material covered includes proper use of a laboratory notebook, writing of a formal laboratory report, use of the chemical literature, experimental design, interpretation of data using statistics, laboratory safety procedures, and an appreciation for what instruments can and cannot do. The course introduces laboratory experimentation in the context of a variety of specific topics, for example: halogens, their compounds and their reactions chemical kinetics of a simple chemical reaction; acid-base equilibria and titrations; oxidation-reduction reactions and electrochemistry; separations of compounds using paper and liquid chromatography; separations using gas chromatography. GN credit for CHEM 113 requires that CHEM 112 or CHEM 112H also be completed.

Enforced Prerequisite: CHEM 111. Prerequisite or Concurrent: CHEM 112 or CHEM 112H

Changes Effective Summer 2020:
- Description

CMLIT 4: Introduction to Asian Literatures (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:
Comparative interpretations of narrative, drama, lyric, and other writings from East Asia and other regions, viewed as world literature.

Cross-Listed Courses: ASIA 4

Changes Effective Summer 2020:
- Description

CMLIT 5: Introduction to Literatures of the Americas (3 Credits) (US) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:
Comparative interpretation of the oral and written literary traditions of North, Central, and South America. CMLIT 5 Introduction to Literatures of the Americas (3) (GH;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. CMLIT 5, Introduction to Literatures of the Americas, allows you to explore the great variety of literatures of the Americas, including translations of texts written in Spanish, French, Portuguese, and Amerindian languages, as well as texts originally written in English. Readings include many genres and artistic forms dealing with histories and accounts of "American" issues, such as conquest, nationalism, slavery, diaspora, and immigration. You will also consider the various influences among these traditions in terms of time period and genre. This course investigates the literary and cultural notion of "America," and what it means to be "American," in terms of the entire hemisphere. We will deal with issues of race, ethnicity, class, religion, as well as other vital concerns of identity and "Americanness" as reflected in both oral and written literary traditions through the history of the Americas. At the conclusion of this course, you should be able to understand and make comparisons among the many "American" literary traditions. This course fulfills requirements for the Comparative Literature major, the World Literature minor, General Education Humanities, Bachelor of Arts Humanities, and General Education United States and International Competency.

Changes Effective Summer 2020:
- Description

CMLIT 10: World Literatures (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:
The development of literature around the world—from epic, legend, lyric, etc. in the oral tradition to modern written forms. CMLIT 010 The Forms of World Literature: A Global Perspective (3) (GH;IL)(BA) This course meets the Bachelor of Arts degree requirements. As a one-semester introduction to the range and diversity of world literature from the ancient past to the present, CMLIT 010 is intended to help you read (or listen to) a work of literature from any time or place and to appreciate it more fully—whether it belongs to the more familiar types of literature you may have read in the Western tradition or is a fable, folk tale, hero story, play, or narrative from another cultural tradition. You will practice expressing your ideas through written exams and in-class and on-line discussions/activities. Discussion sessions allow interaction with the instructor and with other students in the class. This course presents a global sampling of masterpieces of world literature. Through active class participation, you will become familiar with various literary genres and become proficient in the analysis of the similarities and differences between texts from many different time periods and cultures. CMLIT 010 is one of the choices of survey courses which can count toward the Comparative Literature major and the World Literature minor. This course also fulfills the General Education humanities requirement, the Bachelor of Arts humanities requirement, and the United States and International requirement.

Changes Effective Summer 2020:
- Description

CMLIT 105: The Development of Literary Humor (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:
Literary humor expressed as satire, comedy, and farce— from ancient times to the present—in an international and multicultural context. CMLIT 105CMLIT 105 The Development of Literary Humor (3) (GH;IL) (BA) This course meets the Bachelor of Arts degree requirements. CMLIT 105 is a broadly international course dealing with the nature of comedy and humor in literature. You will read samples from a broad spectrum of humor, including comedy, wit, satire, parody, irony, and farce. Through discussion and writing, you will also examine the techniques through which humor criticizes human nature, analyzes society, and expresses differing world views. The syllabus may be represented chronologically or divided into topics or literary forms that suggest various emphases, functions, and objects of literary humor. This course will provide opportunity to discuss both the widespread, or even universal, aspects of literary humor, and the diversity of literary humor across cultures and time periods. At the conclusion of this course, you should be able to understand and compare various literary forms and social, political, and cultural contexts that define humor and to assess the extent to which literary humor is or is not translatable across cultures or ethnic communities, or other groups. This course fulfills requirements for the Comparative Literature major, the World Literature minor, General Education Humanities, Bachelor of Arts Humanities, and General Education International/Intercultural Competency. Student performance in this course will be measured in a variety of ways, including some or all
of the following (always including writing and discussion): -in-class and/or take-home essays/exams -literary diaries or reaction papers -in-class and/or online discussion/participation -individual and/or group in-class presentations/projects -research or topic papers

Changes Effective Summer 2020:

- Description

CMLIT 122: Global Science Fictions (3 Credits) (US) (IL) (BA) (GH)

Old Listing Effective Through Spring 2020:

A study of the relationships between science, literature, and film, from an international and interdisciplinary perspective. CMLIT 122 Global Science Fictions (3) (GH;US;IL) (BA) This course meets the Bachelor of Arts degree requirements. A course on science fiction and the fictions of science from an international and interdisciplinary perspective. Includes a history of the idea of science, of its engagement with and by fictional, filmic, dramatic, and poetic narratives, within an explicitly comparative framework that includes material from Europe, the Americas, Asia, and Africa. Students will develop a theory of genre and its development over time; they will recognize regional, cultural, and historical differences and forms of change that affect the intellectual development of the arts and sciences. They will practice and master these skills through class discussion, short papers, and/or quizzes and exams.

Changes Effective Summer 2020:

- Description

CMLIT 130: Banned Books: International and Comparative Perspectives (3 Credits) (IL)

Old Listing Effective Through Spring 2020:

The world of banned books, their history, and their politics, studied comparatively and internationally. CMLIT 130 Banned Books: International and Comparative Perspectives (3) (GH;IL) This course examines one of the most documented events in the history of book reception—the banning of books. Bannings provide a useful window onto the myriad functions of culture in social identity formation. In order to understand how and why offense is given and taken, students will learn to place texts in a specific context of their historical production and reception and also to extrapolate connections between disparate moments when taboos were named. Incorporating examples from a range of global systems of censorship, the course examines differences in the modes and effects of repression and the sometimes surprising connections between church and monarchy, fascism and democracy. This course raises the following questions: How has censorship been justified? When, if ever, is censorship justifiable? What are the grounds on which censorship can be judged successful or incomplete? Who censors? Who is censored? What are local categories of censorship? Though books are banned for reasons of blasphemy, sedition, and obscenity in various guises in several cultures, are these global categories? How do writers write against a ban? How do they write within it? What are the roles of importation, technologies of circulation, and geography in the censorship of texts? How do border-crossings and forms of miscegenation offend? Is there a unifying aesthetics to books that offend? Class work emphasizes discussions, group work, writing exercises, and student presentations. This participatory approach is intended to deepen students’ appreciation of the works and the historical, literary, and ethical problems they present. The course will help students understand value systems and historical contexts in which they were produced and in which they caused offense. It will also ask students to draw connections between seemingly unrelated moments of offense in order to assist students in developing both analytical and expressive abilities. The course is designed to be suitable for all students, whether or not they have previously studied literature or comparative literature.

Changes Effective Summer 2020:

- Description

CMLIT 131: Crime and Detection in World Literature (3 Credits) (IL) (GH)

Old Listing Effective Through Spring 2020:

Issues of ethics, truth, justice, and social order as embodied in crime and detective literature, presented in comparative contexts. CMLIT 131 Crime and Detection in World Literature (3) (GH;IL) This course studies the origins and development of crime and detective literature from an international and interdisciplinary perspective. Beginning with early Greek tragedies, the course traces literature’s investment in issues of crime, violence, detection, forensics, and social justice through a variety of historical and cultural contexts; this may include the classical era, the early modern period, the Enlightenment, the industrial era, and the modern/contemporary world.

Some of the questions addressed may include reigning myths about law and order; the rise of urban societies and mass culture; the construction of the detective figure, the witness, the criminal, and the victim as models of subjectivity; issues of gender and sexual violence; and the nature of justice. Students will learn about the history of the idea of crime and its relationship with literary form. They will develop ideas about the contribution of literary thinking to ideas of social justice, as well as a theory of genre and its development over time; they will recognize regional, cultural, and historical differences and forms of change that affect the intellectual development of literature and detection alike. They will practice and master these skills through class discussion, short papers, and/or quizzes and exams.

Changes Effective Summer 2020:

- Description

CMLIT 132: Nobel Prize Literature (3 Credits) (IL) (BA) (GH)

Old Listing Effective Through Spring 2020:

Introduction to Nobel Prize winning literature and the culture of the prize in international and historical context. CMLIT 132 Nobel Prize Literature (3) (GH;IL) (BA) This course meets the Bachelor of Arts degree requirements. This course will provide an introduction to Nobel prize-winning literature. Students will learn about the authors and their works in cultural and historical context. Readings will cover several genres (such as poetry, drama, short story, and novel) and will include authors from an array of linguistic and cultural traditions (such as African, Latin American, Middle Eastern, European, North American, and Asian). In addition to reading primary literature, students will enrich their understanding of literary history by exploring secondary material such as essays, short biographies, reviews of author’s works, and the authors’ Nobel Prize acceptance lectures. The course will begin by introducing Alfred Nobel, founder of the Nobel Prize, and by surveying the parameters guiding how the prize has been awarded since its inauguration in 1901. Further readings may be organized temporally or thematically, but will be structured so that students develop a global perspective, allowing them to understand the variety of cultural contexts that have inspired the creative works under study. By examining the primary literature in connection with developing trends in prize culture, students will investigate such topics as pacifism and optimism in international
prize culture, narrative and rhetorical techniques, the formation and expression of identity, changing gender roles and social expectations, the development of global Englishes, the emerging notion of world literature, and the changing climates of censorship and freedom of expression. Class work includes some lecture but emphasizes guided discussions, group work, short writing exercises, and some student presentations. This participatory approach is intended to deepen students’ appreciation of the works, to assist students in developing analytical and expressive abilities, and to encourage students to pursue individual areas of interest by researching cultural norms and historical situations in a range of times and places. Through critical reading, group discussion, short writing exercises, and group presentations, students will hone skills for evaluating modes of cultural production and valuation. Evaluation will be through means such as in-class presentations, short writing assignments or quizzes, and a final exam or final paper. The course is designed to be suitable for all students generally interested in literature and the globalization of culture. Prior study of literature is not required and all materials will be available in English.

Changes Effective Summer 2020:

- Description

CMLIT 141: Religion and Literature (3 Credits) (US) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:

Major religious themes as expressed in literary masterpieces; sacred texts from various cultures read as literature. CMLIT 141 Religion and Literature (3) (GH;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. CMLIT 141 is an introduction to literature, to religious writing, and to the many ways in which literature draws upon or interacts with religion. Among the many possible relationships between religion and literature are: straightforward dramatization of sacred texts; allegory; expression of mystical experience; exploration, dramatization, and individualization of theological issues; the creation of literature to promote or to meet the needs of piety; and utilization of religious imagery and symbolism as a poetic resource. Readings will include sacred texts, and also literature that draws upon or responds to sacred texts and religious traditions. It may also include avowedly secular literature that shows some relationship to religious tradition, and even literature questioning or critical of specific religious traditions or their adherents. Students will read works from a range of historical periods and world cultures, both Western and non-Western. Students will be evaluated on essay exam questions, short answer and objective exam questions, reading journals, quizzes, in-class discussion, group projects, research and critical papers, and final comprehensive written exam. CMLIT 141 is not required for the CMLIT major but may be selected to fulfill one of the course requirements for the major or for the World Literature Minor. This course also fulfills the General Education Humanities requirement, the Bachelor of Arts Humanities requirement, and the United States and International Cultures requirement.

Changes Effective Summer 2020:

- Description

ENGL 184: The Short Story (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:

LECTURES, DISCUSSION, READINGS IN TRANSLATION, WITH PRIMARY EMPHASIS ON MAJOR WRITERS OF THE NINETEENTH AND TWENTIETH CENTURY.

Cross-Listed Courses: CMLIT 184

Changes Effective Summer 2020:

- Description

ENT 222: Honey Bees and Humans (3 Credits) (GN)
Old Listing Effective Through Spring 2020:

This course explores the unique biology and behavior of bees, examining our relationship with them through time and across cultures. ENT 222 Honey Bees and Humans (3) (GN) This course will discuss the uniqueness of honey bees – no other insect, except perhaps the silk moth, has been harnessed so effectively to benefit humankind. Students will explore topics of biodiversity, behavioral ecology, sociobiology,
insect physiology, infectious diseases, host-parasite interactions, food security, the development of agricultural practices across cultures and time, conservation and the art of communicating science to the public. Students will be provided an understanding of (1) honey bee behavior (particularly their complex and sophisticated social systems), biology, and health, (2) the important contributions honey bees and their pollination services make to maintaining natural ecosystems and increasing productivity of many of our key agricultural crops; and (3) the global history of humans’ interactions with honey bees, and how people from many cultures have managed bees to provide honey, wax, and pollination services.

Changes Effective Summer 2020:

- Description

**ERM 412: Resource Systems Analysis (3 Credits)**

**Old Listing Effective Through Spring 2020:**

The concept of systems; techniques of analysis, including input/output, mathematical programming, and simulation; application to resource systems. E R M 412 Resource Systems Analysis (3) E R M 412 is a course in problem solving, as it relates to environmental and resource related issues. The course covers a variety of problems within an environmental context, including mass balance, steady-state, and dynamic problems. Students will gain experience in making assumptions and testing those assumptions in the application of biological, chemical, and physical principles to problem solving. The course is designed to develop experience in quantitative problem solving using spreadsheets, modeling tools, and computer-based statistical analysis.

Prerequisite: BIOL 220W, E R M 151, E R M 300, and STAT 240; MATH 111 or MATH 141

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Abbreviated Title

**FDSC 460: Food Production in Italy (1 Credit: Maximum of 1 Credit)**

**Old Listing Effective Through Spring 2020:**

Embedded study tour of food processing facilities abroad. D SC / INTAG 460 is designed to give upper level food science students an appreciation of how food is produced and processed abroad. Students participate in a number of production facility tours, interact with food scientists native to Italy, and gain valuable international experience. A major point of emphasis for the course is comparing and contrasting food production norms in the U.S. and in Italy. The course consists of pre-trip classes/meetings and a faculty-guided trip of Italy. Prior to the travel component of the course, students work in small groups to research a specific food product that is of economic and cultural importance to an Italian region of interest, then write reports to be presented in-country before a tour of the related product’s production facility. The course integrates and builds upon core concepts in food chemistry and food microbiology; as such, FD SC / INTAG 460 is targeted towards upper-level food science undergraduate students, as well as food science graduate students.

Prerequisite: FD SC 400, FD SC 408, or permission of program

Cross-Listed Courses: INTAG 460

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Make Repeatable Up to 3 credits
- Title
- Abbreviated Title

**GEOSC 10: Geology of the National Parks (3 Credits) (BA) (GN)**

**Old Listing Effective Through Spring 2020:**

Introduction to geology, geological change, and environmental hazards, as seen in the National Parks. GEOSC 010 GEOSC 010 Geology of the National Parks (3) (GN)(BA) This course meets the Bachelor of Arts degree requirements. “Geology of the National Parks” uses the unsurpassed features of national parks to address the key questions of geology and the environment. Each topic is introduced with a virtual field trip to a specially chosen national park (involving pictures of the park, a brief history, other highlights of the park, with supplemental materials and links provided on-line). Key questions about the park (Why has Death Valley been getting wider? Why is much of Mt. St. Helens spread across neighboring states?) then motivate discussion of the topic (here, the spreading or squeezing associated with drifting continents), with special attention to implications for humans (for example, predicting earthquakes and volcanic eruptions associated with these features). A suite of exercises provides the opportunity for analytical experience during walking field trips of local geology, quantitative analysis of geological data, written evaluation of library-based information on national parks, and collaborative on-line assessment of geological hazards. Readings are primarily drawn from an on-line text prepared especially for the course, with links to appropriate national-park sites, but readings also include additional technical literature. There are no prerequisites for the course. It is offered twice yearly at University Park, with enrollment fixed by available classroom space (recently, 300 in the spring and 400 in the fall). The goals of the course are to help students learn how certain common-sense ideas allow science to be such a successful human endeavor, that the Earth efficiently but slowly recycles almost everything, that the Earth’s environment has been nearly balanced for very long times, that human-induced changes are among the fastest Earth has ever experienced, and that the National Parks are critical but challenged living laboratories, museums, and repositories of biodiversity. In doing so, the students will see the applications to real-world problems of related fields including physics, chemistry, biology, and mathematics, and will develop a greater appreciation of these other subjects. Students will be challenged to reason from data to generalizations, and from these generalizations back to cases, through in-class discussion, exercises (approximately 1/4 to 1/3 of the total grade), and examinations (primarily objective). Owing to the large enrollment, in-class time will be devoted to virtual field trips, discussion and lecture, but with much effort to encourage participation from the students. Activities out of class will focus on exercises and on the extensive web resources developed in collaboration with the Education Institute of the College of Earth and Mineral Sciences.

Changes Effective Summer 2020:

- Description

**GER 128: The Holocaust in Film and Literature (3 Credits) (US) (IL) (GH)**

**Old Listing Effective Through Spring 2020:**

Thematic, formal, and historical analysis of filmic and literary representation of the Holocaust. GER (CMLIT/J ST/ENGL) 128 The Holocaust in Film and Literature (3) (GH;US;IL) This course provides an introduction to the film and literature of the Holocaust through a
historical survey of these traditions' key texts, figures, and themes. Both US and international texts and traditions will be covered, as will both fictional and nonfictional treatments of the Holocaust. The course will focus on the defining aspects of the literature and film and on what these traditions reveal about the Holocaust and about how we understand the Holocaust. The course will use Holocaust literature and film to seek both the points of cohesion and the points of divergence that characterize the experience of the Holocaust, the interpretive cultures through which we approach the Holocaust, and Jewish and other cultures. The course will also introduce students to the concept and theory of trauma, and to its place in theories and traditions of representation, as well as to the concept and history of genocide. Some time will be spent analyzing what has been called the Americanization of the Holocaust. Materials will consist predominantly of primary texts, including both fiction and nonfiction film, prose fiction and nonfiction, poetry, and drama. Course methodology will emphasize the close reading of texts and analysis not only of what is represented, but also of the "how" of representation, drawing students' attention to genre distinctions and the different expectations we bring to fiction and non-fiction, to film and the written word.

Cross-Listed Courses: JST 128 ENGL 128 CMLIT 128

Changes Effective Summer 2020:
- Description
- Number to 128N
- Cross-Listed Course numbers to JST 128N ENGL 128N CMLIT 128N
- Add GH Designation
- Add Inter-Domain Designation
- Add BA Humanities Designation
- Add BA Arts Designation

GER 190: Twentieth-Century German Literature in English Translation (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:
Works of such writers as Boll, Brecht, Durrenmatt, Frisch, Grass, Hesse, Kafka, Mann, Rilke, Weiss, and Wolf.

Changes Effective Summer 2020:
- Description

HIST 3: The American Nation: Historical Perspectives (3 Credits) (US) (BA) (GH)
Old Listing Effective Through Spring 2020:
American history from discovery to the present, focusing on both racial, ethnic, and religious differences and shared traditions and ideals. HIST 003 The American Nation: Historical Perspectives (3) (GH;US)(BA) This course meets the Bachelor of Arts degree requirements. This course covers American history from discovery to the present, focusing on racial, ethnic, and religious differences as well as shared traditions and ideals. Major economic, religious, political, and social issues and events from first contact to the present day are addressed, although individual versions of the course may vary in emphasis. Topics, which vary with instructor, view the American past through such lenses as democracy, the world of work, and daily life. A major teaching goal of the course is the use of historical evidence, in the form of documents, images, and other materials, to formulate interpretations of the past. Lectures and readings from textbooks, books, chapters, and academic articles provide the essential material of the course and are supplemented by electronic media. The course requirements typically consist of exams, quizzes, and class attendance and participation; they may include short papers as well. (Note that these are the typical, general requirements. Individual instructors may make adjustments that will maintain the intellectual integrity and pedagogic intent of the course.) The course provides an overview of American history and is therefore related to all upper division courses on this subject. It also introduces students to basic cultural and social movements essential to courses in American studies, art history and music and to courses in the social sciences.

Changes Effective Summer 2020:
- Description
- Abbreviated Title
- Add Cross-Listed Course AMST 3

HM 481: Advanced Topics in Hotel Management (3 Credits: Maximum of 3)
Old Listing Effective Through Spring 2020:
Advanced topics related to the hotel industry

Prerequisite: a grade of ‘C’ or better in HM 380

Changes Effective Summer 2020:
- Description
- Prerequisite/Corequisite/Concurrent Courses
- Make Not Repeatable

IT 140: Italian Language & Culture for Study Abroad (3 Credits) (IL)
Old Listing Effective Through Spring 2020:
Prepares students for study abroad in Italy through contact with language and customs. Includes pragmatic information and cultural intelligence/sensitivity.

Changes Effective Summer 2020:
- Description
- Abbreviated Title
- Add GH Designation

KINES 68: Strength Training (1.5 Credits) (GHA)
Old Listing Effective Through Spring 2020:
Designed to improve students' muscular strength/endurance, teaches students how to develop an effective personal strength/endurance training program for lifelong fitness. KINES 068 Strength Training (1.5) (GHA) The purpose of this class is to learn the basic principles of strength training, the role of weight lifting in an overall program of health and wellness, and to acquire the necessary skills and experience to develop an individualized program for developing muscular strength and endurance. Kinesiology 068 will require the student to understand the following specific objectives: 1) Become proficient in the use of various types of equipment used to improve strength and endurance. 2) Learn the essential components of a weight training program and overall fitness program. 3) Conduct specific tests to measure muscular strength and endurance. 4) Assess muscular fitness level by comparing strength testing results to national averages. 5) Improve muscular strength and endurance. Ample time will be devoted to allow students to acquire proper technique for a wide variety of strength training exercises and to create a personal training program. Students will have adequate time to train and should significantly improve strength and endurance throughout the
semester. At regular intervals, strength and endurance will be assessed. Students will complete summary reports in which they compare their fitness levels to national standards and will chart individual progress throughout the semester. Throughout the semester, it will be emphasized to the student that strength training is one aspect of a personal health and wellness program and that the student must assume personal responsibility to develop and maintain his/her health and fitness level for life. Students will be encouraged to explore their personal health and fitness goals and how strength training may be incorporated into their lifelong fitness plan. Various evaluation techniques will be used to assess individual progress in Kinesiology 068. These techniques will include (but are not limited to) conventional objective testing, skill and fitness testing, and writing assignments.

Changes Effective Summer 2020:

- Description
- Title
- Abbreviated Title

KINES 077: Yoga I (1.5 Credits) (GHA)
Old Listing Effective Through Spring 2020:

A course designed to give students an understanding of and proficiency in yoga. KINES 077 Yoga I (1.5) (GHA)(BA) This course meets the Bachelor of Arts degree requirements. Kinesiology 077 introduces students to the performance of yoga as a lifelong activity that maintains and enhances physical health and psychological well-being. This course provides the information that the student needs to understand, organize, plan, and implement a wellness program that features yoga as a primary activity. The centerpiece of this course is a series of activity classes that introduce students to classical yoga postures that address such needs as stress management, muscular tightness, skeletal alignment, and injury rehabilitation. In addition to posture instruction, each class begins with a period of breathing and meditation practice where students are taught to use various breathing techniques to calm the mind and focus mental energy on specific tasks. These activities are complemented by a series of classroom lectures on such topics as the historical and philosophical foundations of yoga, nutritional practices that enhance the value of a lifelong yoga program, and Eastern-based movement traditions that complement yoga practice. Students also have the opportunity to complete reflective essays on various aspects of yoga philosophy and lead a group-designed yoga class. When a student completes Kinesiology 077, he or she will be able to identify the components of an effective lifelong wellness program and explain how yoga contributes to the success of this program; perform yoga to develop flexibility, strength, and cardiovascular endurance; select and perform yoga postures that address specific needs (e.g., stress management, muscular tightness); describe the philosophical and historical framework that supports yoga practice; and understand how effective breathing and meditation techniques promote physical and psychological well-being. Various evaluation techniques will be used to assess students’ progress in Kinesiology 077. These techniques can include (but are not limited to) conventional objective testing; skill testing that evaluates the performance of specific yoga postures; reflective essays on aspects of yoga history and philosophy; and performance in a group-designed yoga class.

Changes Effective Summer 2020:

- Description
- Title
- Abbreviated Title

KINES 77A: Advanced Yoga (1.5 Credits) (GHA)
Old Listing Effective Through Spring 2020:

A course designed to expand on a student’s fundamental understanding of and proficiency in yoga. KINES 077A Advanced Yoga (1.5) (GHA) Kinesiology 077A is a course based on a system of ultimate health created in India 5,000 years ago and now practiced by all contemporary societies throughout the world. Students who enter this course are introduced to a deeper and more detailed knowledge and practice of this ancient curriculum. Students will become familiar with the research data that supports that yoga is beneficial to muscular, endocrine, cardiovascular, digestive and skeletal systems of the body. Each class period is devoted to practicing yoga postures with the knowledge of their specific benefits. For instance, when learning the bridge pose students will learn that the bridge increases flexibility in the back and shoulders, strengthens the leg muscles and stimulates thyroid function. Students learn to integrate such knowledge into their personal practice of yoga outside of class. In addition to learning more about the development of a personal practice advanced yoga also provides the students with many opportunities to also practice yoga off of the yoga mat or in their own personal student life. In both written and verbal opportunities students share how yoga and the practice of yoga is “showing up” in their lives. Sanskrit is the Indian language of yoga. There are opportunities in Advanced Yoga to understand and translate the language and to be able to express Sanskrit in relationship to meditation techniques, energy center practices, temperament determination and application of specific yogic activities. When students complete the course they will be able to perform yoga to increase flexibility, strength and cardiovascular endurance. They will have studied and performed breathing techniques, and developed a daily yoga practice. They will also be able to perform new intermediate yoga postures and to perfect the beginning postures learned previous to this classroom experience. They will also have a basic knowledge of the energy systems of the body as described in Indian Ayurvedic medicine. Various evaluation techniques will be used to assess student’s progress in Kinesiology 077A. These techniques can include (lesson plan and teaching to support certain postures and posture series, journal writing with verbal and written criteria, and portfolio construction.) There are no special facilities for this course. The Department plans to offer one section each fall and spring semester with a maximum enrollment of 30 students.

Changes Effective Summer 2020:

- Description
- Title
- Abbreviated Title

KINES 82: Action Methods for Stress Management (3 Credits) (GHA)
Old Listing Effective Through Spring 2020:

Achieving wellness by studying the effects of stressors on systems of the body and effectiveness of activity to relieve stress.

Changes Effective Summer 2020:

- Description
- Abbreviated Title
KINES 90: Introduction to Team Sports/Indoor (1-1.5 Credits: Maximum of 99 Credits) (GHA)
Old Listing Effective Through Spring 2020:

A course designed to introduce students to indoor team sports. KINES 090 Introduction to Team Sports/Indoor (1-1.5) (GHA) Kinesiology 090 is a course that has been designed to give the Penn State student an introduction to a selected indoor team sport such as, but not limited to, basketball, volleyball and/or handball. The fundamental skills, strategies, and rules will be covered for the selected sport. Successful completion of the course will provide a foundation for participation in intramural activities, recreational activities, and provide a gateway to life long movement. While Kinesiology 090 will focus on the skills, strategies and rules of a selected team sport, the underlying sub-focus of this course is the development of the social skills required to be a good team member. The commitment to a team sport requires students to encounter a collaborative atmosphere. As the students seek to solve complex movement problems they learn to co-operate to achieve various team goals. The improvement of individual skills is important, however, the successful integration of these individual skills into the team is a valuable life lesson. As the student leaves the university, the lessons learned in this class will prepare him/her for "team " membership in their various areas of professional practice. Students in Kinesiology 090 will be evaluated by a combination of evaluation techniques which may include but not be limited to, written reports, skills testing, tournament performance and subject evaluation of "team" work ethics.

Changes Effective Summer 2020:

- Description
- Title
- Abbreviated Title
- Credits to 3
- Make Not Repeatable

KINES 91A: Introduction to Team Sports/Outdoor - Soccer (1-1.5 Credits: Maximum of 99 Credits) (GHA)
Old Listing Effective Through Spring 2020:

A course designed to introduce students to the outdoor team sport of Soccer. KINES 091A Introduction to Team Sports /Outdoor –Soccer (1.5 per semester) (GHA) Kinesiology 091 is a course that has been designed to give the Penn State student an introduction to a selected outdoor team sport such as but not limited to Soccer, Ultimate Frisbee, Rugby and/or Speedball. The fundamental skills, strategies and rules will be covered for the selected sport. Successful completion of the course will provide a foundation for participation in intramural activities, recreational activities and provide a gateway to life long movement. While Kinesiology 091 will focus on the skills, strategies and rules of a selected team sport the underlying sub-focus of this course is the development of the social skills required to be a good team member. The commitment to a team sport requires students to encounter a collaborative atmosphere. As the students seek to solve complex movement problems they learn to co-operate to achieve various team goals. The improvement of individual skills is important however the successful integration of these individual skills into the team is a valuable life lesson. As the student leaves the university the lessons learned in this class will prepare him/her for "team " membership in their various areas of professional practice. Students in Kinesiology 091 will be evaluated by a combination of evaluation techniques which may include but not be limited to, written reports, skills testing, tournament performance and subject evaluation of "team" work ethics. Clean, safe, well-lit court/field is necessary to properly deliver this course. It is anticipated that the department will offer at least two sections every fall and spring with an expected enrollment of 45 students per section.

Changes Effective Summer 2020:

- Description
- Title
- Abbreviated Title
- Make Not Repeatable

KINES 91C: Introduction to Team Sports/Outdoor - Rugby (1-1.5 Credits: Maximum of 99 Credits) (GHA)
Old Listing Effective Through Spring 2020:

A course designed to introduce students to the outdoor team sport of Rugby. Kines 091C Introduction to Team Sports / Outdoor –Rugby (1.5 per semester) (GHA) Kinesiology 091 is a course that has been designed to give the Penn State students an introduction to a selected outdoor team sport such as but not limited to Soccer, Ultimate Frisbee, Rugby and/or Speedball. The fundamental skills, strategies and rules will be covered for the selected sport. Successful completion of the course will provide a foundation for participation in intramural activities, recreational activities and provide a gateway to life long movement. While Kinesiology 091 will focus on the skills, strategies and rules of a selected team sport the underlying sub-focus of this course is the development of the social skills required to be a good team member. The commitment to a team sport requires students to encounter a collaborative atmosphere. As the students seek to solve complex movement problems they learn to co-operate to achieve various team goals. The improvement of individual skills is important however the successful integration of these individual skills into the team is a valuable life lesson. As the student leaves the university the lessons learned in this class will prepare him/her for "team " membership in their various areas of professional practice. Students in Kinesiology 091 will be evaluated by a combination of evaluation techniques which may include but not be limited to, written reports, skills testing, tournament performance and subject evaluation of "team" work ethics. Clean, safe, well-lit space/field is necessary to properly deliver this course. It is anticipated that the department will offer at least two sections every fall and spring with an expected enrollment of 45 students per section.

Changes Effective Summer 2020:

- Description
- Title
- Abbreviated Title
- Make Not Repeatable

KINES 93: Masters Activity (Sport) (1.5-12 Credits: Maximum of 12 Credits) (GHA)
Old Listing Effective Through Spring 2020:

A course that introduces students to movement subcultures by providing the knowledge, habits, and skills for activity across the lifespan. KINES 093 Masters Activity (Sport) (1 per semester/maximum of 12) (GHA) The Masters Curriculum provides a unique approach to movement education. Rather than focusing on regimented skill development over a period of a semester or less, KINES 093 requires students to incorporate activity into their weekly schedules for a year or longer. Because this is a self-paced and self-designed curriculum, students must also take responsibility for the kind, quality, and amount of activity they experience. By signing an activity contract with the master teacher each semester and being
required to demonstrate progress made through portfolio evaluations, students are further encouraged to take responsibility for developing the habits of active living—not just fulfilling a requirement. The curriculum is designed to bring a higher percentage of students into a movement subcultures higher percentage than can be achieved in the shorter, instructor-directed, and more traditional educational setting. In order to achieve this in-depth experience, students will be required to take two masters courses (1.5 credit each) in the same activity. Sequential enrollment provisions will be needed, with a maximum of 3 credits counting toward General Education requirements. Each student will meet with the master instructor at the start of a semester to review a menu of activity opportunities (see outline above) in a specific movement domain. Students, in consultation with the instructor, will select a cluster of learning experiences to be encountered that semester. Each menu item chosen will be recorded on the contract along with the method or methods by which that item will be documented in the student’s portfolio. The agreed upon documentation must be provided before credit is awarded. A completed contract will be signed by both the student and the master teacher. Regular communication between each student and instructor, consistent with the nature of the contract and the activities selected from the menu, will be assured. In addition, students will be required to become connected to a movement subculture by joining an appropriate organization and/or subscribing to relevant publications during that two-semester period of time needed for completing the requirement. When students have finished the 3 credits, they will be encouraged to continue with Masters development either as performers or as peer instructors for less experienced students. This length and intensity of involvement is designed to produce students who become bona fide members of a movement subculture by the time they leave the program. The expectation is that they will embody the habits, values, and attributes needed for an active, healthy lifestyle.

Prerequisite: successful completion of relevant activity course or permission of the instructor

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Title
- Abbreviated Title
- Credits

KINES 321: Psychology of Movement Behavior (3 Credits)
Old Listing Effective Through Spring 2020:

Psychology of Movement Behavior is designed to introduce students to the basic concepts and applications of psychological knowledge for organized sport, physical activity, athletic training, and related environments where people are active. The course touches on the history of sport and exercise psychology, sport and exercise psychology consultants’ responsibilities (i.e., research, teaching, and service), and understanding sport and exercise participants’ personality traits and motivation for participation. The course also promotes an understanding of sport and exercise environments through discussion of competition, group dynamics, and the principles of feedback and reinforcement. Performance enhancement is also covered through discussion of topics related to psychological skills training and application (e.g., goal setting, imagery, and relaxation training). Finally, the course focuses on enhancing sport and exercise participants’ health and well-being by promoting an understanding of addictive behaviors (e.g., exercise dependence, eating disorders, and substance dependence), body image, injury rehabilitation, and exercise initiation, maintenance, and adherence. The general objective of this course is to familiarize the student with the science and practice of sport and exercise psychology from both a theoretical and applied perspective. To achieve this objective, the student will: (a) develop an understanding of how various psychological factors influence athletic performance, physical activity participation, and overall health and well-being; (b) learn the methods used by athletes and exercisers of various skill levels to achieve peak performance; (c) understand the scientific and theoretical background of sport and exercise participation; and (d) comprehend how psychological skills are applied to sport and exercise environments to enhance peak performance and quality of life, and recognize the ethical principles of applying these psychological skills.

Prerequisite: Students must have a C or better in: KINES 101; KINES 180

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

KINES 384: Biomechanics (3 Credits)
Old Listing Effective Through Spring 2020:

Basic mechanical knowledge required to understand human movement. KINES 384 Biomechanics (3)Biomechanics examines biological phenomena from a mechanical perspective. This class examines predominantly human movement from this perspective. The class aims to introduce students to the mechanical principles that underpin biomechanics, and to the measurement procedures used in biomechanics. Students will examine these principles for a variety of activities including: walking, running, jumping, quiet standing, throwing, striking, and reaching. Laboratory activities emphasize the qualitative and quantitative analysis of human movement. These sessions require students to work effectively in groups to collect data, and then work independently to analyze and interpret their data. Students use Newton’s laws, basic algebra and trigonometry in the analysis of their data, and produce reports about these laboratory activities. The lectures provide the framework for all class activities. They aim to link the student’s knowledge of anatomy with mechanics to provide an understanding of how movement is produced in both health and disease. The lectures provide information about the history, scope, and impact of biomechanics. Students are introduced to the pertinent kinematic variables required for the analysis of human movement. Newton’s laws are used to understand both linear and angular human motion. Basic principles from aerodynamics are introduced as they may apply to man and the implements he or she may use. The examination of aerodynamic factors is augmented by examining the mechanics of balls spinning, and bouncing. Approaches for the determination of the inertial properties of human body segments are examined in detail, with a view to understanding the strengths and weaknesses of the various approaches. The theory, methodology, and protocols for image-based motion analysis are introduced as common methodology used in biomechanics. The principles behind force measurement are presented, using force plates as the core example. Students are taught the basics of the interpretation of ground reactions forces, using the impulse-momentum relationship. Contractile muscle mechanics are studied to understand the influences of muscle fiber activation, length, and velocity on the production of force are presented. The mechanical properties of tendon are presented (stress-strain relationship), and its role in human movement. Potential and kinetic energy are introduced, along with the concept of energy storage and its application in the analysis of human movement examined. The principles governing modeling are introduced, and approaches for modeling human
movement are established and then used to understand the coordination of human movement.

Prerequisite: C or better in KINES 101 or KINES 180, and KINES 202, PHYS 150 or PHYS 250

**Changes Effective Summer 2020:**
- Description
- Prerequisite/Corequisite/Concurrent Courses
- Add GQ Designation

**MATH 18: Elementary Linear Algebra (3 Credits) (BA) (GQ)**
Old Listing Effective Through Spring 2020:

Linear functions; systems of equations; matrices; linear programming.

Prerequisite: 2 units of high school mathematics

**Changes Effective Summer 2020:**
- Description
- Prerequisite/Corequisite/Concurrent Courses
- Number to 38

**ME 360: Mechanical Design (3 Credits)**
Old Listing Effective Through Spring 2020:

Specification of components such as shafts, bearings, and power transformers; optimal designs for operational, environmental, and manufacturing requirements. ME 360 Mechanical Design (3) This course is required for all mechanical engineering students, and is taken in the junior year. It is an introduction to analysis and design of mechanical components. It helps provide practical insight into theory provided by prerequisites in engineering mechanics and materials science. Students initially perform yielding and fatigue failure predictions for general structural elements and then focus on specific mechanical components such as gears, fluid film bearing, rolling element bearings, screws, shafts and springs. Use and interpretation of finite element analyses (FEA) are also introduced. The overall goals are for students to learn to make basic design decisions regarding the suitability of different materials in mechanical components (e.g. steel versus aluminum); and to make basic design decisions regarding the suitability of different components in a mechanical system (e.g. ball bearings versus fluid film bearings).

Prerequisite: Prerequisite or concurrent: CMPSC200 and E MCH315

**Changes Effective Summer 2020:**
- Description
- Prerequisite/Corequisite/Concurrent Courses

**METEO 3: Introductory Meteorology (3 Credits) (BA) (GN)**
Old Listing Effective Through Spring 2020:

Nontechnical treatment of fundamentals of modern meteorology and the effects of weather and climate. A student who took METEO 002 may take the laboratory part of this course for 1 credit only. METEO 003 Introductory Meteorology (3) (GN)(BA) This course meets the Bachelor of Arts degree requirements. The objectives of the course are for students to gain a better understanding of atmospheric structure and processes so they can better apply the weather information they encounter. Students will learn to read the sky so they can make their own short-term forecasts and adjust their behavior accordingly. When presented with a weather forecast containing caveats, they will have a better feeling for what controls the evolution of a developing system so they can understand why a certain degree of hedging is necessary. Students will be better able to assess the validity of the commonly expressed concerns about climate change and deteriorating air quality. Each semester, the several sections of METEO 003 at University Park use material and exercises drawn from a common textbook such as A World of Weather: Fundamentals of Meteorology by J.M. Neseand L.M. Grenci. The lecture, taught by an instructor, is supported by weekly labs that are taught by different people, normally student teaching assistants.

**Changes Effective Summer 2020:**
- Description

**MGMT 401: Contemporary Issues in Management (3 Credit)**
Old Listing Effective Through Spring 2020:

Advanced treatment of topics of current managerial significance. Issues examined will differ by instructor, section, and semester. Consult departmental office.

Prerequisite: MGMT 321 , MGMT 331 ; or MGMT 326

**Changes Effective Summer 2020:**
- Prerequisite/Corequisite/Concurrent Courses

**MICRB 151A: Clinical Chemistry for Medical Laboratory Technicians (5 Credits)**
Old Listing Effective Through Spring 2020:

Basic principles and procedures for measuring chemical components of blood and other body fluids. MICRB 151A Clinical Chemistry for Medical Laboratory Technicians (5) This course is taken with (or before) Micrb 151D - Clinical Chemistry Practicum. Topics include: laboratory safety; phlebotomy; quality assurance; lab math; instrumentation in clinical chemistry; measurement of carbohydrates, proteins, electrolytes, lipids, hormones, enzymes, tests of kidney and liver function, and their clinical significance. Laboratory sessions focus on basic measurement techniques, using spectrophotometry. Upon completion of Micrb 151A, the student will be able to: 1. Perform mathematical calculations necessary to prepare reagents, analyze data, calculate results, and analyze specimens in the clinical chemistry department. 2. Recognize pre-analytical errors related to specimen collection. 3. Describe methods and interpret the clinical significance of common chemical analyses. 4. Discuss the theory of operation of basic chemistry instruments and apply these principles to the use, maintenance, and troubleshooting of these instruments. 5. Perform common chemical analyses in student lab. 6. Assess the validity of patient results by correlating laboratory data with quality control results. 7. Demonstrate methods of maintaining a safe working environment in the chemistry laboratory. 8. Relate the clinical significance of chemistry assay results to case study presentations.

Prerequisites: Enforced Prerequisite at Enrollment: BIOL 141 and CHEM 202 and MICRB 150 and MICRB 201 and MICRB 202

**Changes Effective Summer 2020:**
- Description
- Prerequisite/Corequisite/Concurrent Courses
Blood cell identification and analysis. Related procedures for diagnosing normal or disease states of blood cells and coagulation. MICRB 151B Hematology for Medical Laboratory Technicians (5) This course is taken with (or before) Micrb 151E - Hematology Practicum. Topics include: hematopoiesis; measurement of red cells, white blood cells, and platelets; significance of hematological diseases; principles of coagulation and related disease states, with emphasis on common factor deficiencies and platelet abnormalities. Laboratory sessions focus on manual techniques, and microscopic identification of blood cells. A capstone project requires the student to research and present a patient case study to the class. Upon completion of Micrb 151B, the student will be able to: 1. Discuss the importance of proper collection of blood for hematological studies. 2. Discuss hematopoiesis in terms of normal and abnormal cell differentiation and proliferation. 3. Describe methods and interpret the clinical significance of common hematological and coagulation tests. 4. Perform basic manual hematological procedures in student laboratories. 5. Describe methods and interpret the clinical significance of hematology assay results to patient case studies. 6. Demonstrate methods of maintaining a safe working environment in student laboratories. 7. Relate the clinical significance of hematological diseases with quality control results. 8. Recognize and identify abnormal red and white cell morphology in peripheral blood smears. 9. Discuss the theory of operation of hematology instruments. 10. Present a patient case study to the class, discuss lab results and symptoms in context of pathological mechanisms.

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

MICRB 151C: Immunohematology and Serology for Medical Laboratory Technicians (4 Credits)
Old Listing Effective Through Spring 2020:

Antigen-antibody interactions of diagnostic importance. Immunologic principles and procedures necessary for the transfusion of blood products. This course is taken with (or before) Micrb 151F - Immunohematology Practicum. Topics include: principles of normal immune function, with emphasis on humoral immunity; common serology tests used to diagnose infection and disorders of the immune system; selection and testing of donors and preparation of blood components; testing required to determine blood types and detect unexpected antibodies that impact selection of blood products; transfusion practice, transfusion reactions; hemolytic disease of the fetus and newborn. Laboratory sessions focus on manual techniques, ABO and Rh testing, antibody identification. Upon completion of Micrb 151C, the student will be able to: 1. Discuss the principle of common serology tests and their use in the diagnosis of infectious disease and disorders of the immune system. 2. Outline the mechanisms involved in the immune process. 3. Interpret the clinical significance of serology and immunology assays. 4. Discuss donor requirements, and the preparation and handling of blood products. 5. Demonstrate and explain the principles of routine pre-transfusion test procedures including the crossmatch, antibody detection and identification. 6. Discuss the clinical significance and principle of special pre-transfusion techniques including absorption and elution. 7. Describe and demonstrate methods of maintaining a safe working environment in the student laboratory. 8. Apply principles of quality control to serology and immunohematology testing. Prerequisites: Enforced Prerequisite at Enrollment: BIOL 141 and CHEM 202 and MICRB 150 and MICRB 201 and MICRB 202

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

MUSIC 9: Introduction to World Musics (3 Credits) (IL) (BA) (GA)
Old Listing Effective Through Spring 2020:

An overview of the music of India, China, Japan, Indonesia, Africa, and the Middle East. MUSIC 009 Introduction to World Musics (3) (GA;IL) (BA) This course meets the Bachelor of Arts degree requirements. MUSIC 009 is a course that explores world cultures through their music. The course begins with an overview of ways to examine world music as a cultural phenomenon. The goal of this section is to help students move beyond their preconceived understanding of music in order to open their minds and ears to a wide variety of music through a selection of case studies, including but not limited to, the music of the Celtic nations, the African continent, West Asia (the Middle East), India, Indonesia, Japan, and the Native American culture groups. The music of these cultures is explored both as a product and reflection of culture and as an aesthetic art form. Through this approach students not only develop a basic fluency in the characteristics of selected world music, but also gain a broader understanding of the general classifications and geographical divisions of world music and the ways in which music relates to and is a part of world cultures. Two primary methods of evaluation are used. Four examinations test the students' understanding of the material. Two assigned reaction/research papers provide students with the opportunity to explore particular types of music in greater depth, examining both the music itself and the social context in which it is found. These papers require students a) to think actively about contemporary musical developments around the world, including how they are affected by current socio-political events and cultural trends; and b) to utilize resources available in the university library as a way of exploring these developments. World musics are best understood when students engage in the music and in discussions of the music and culture; thus there is also a class participation/discussion component for the purposes of evaluation. The course requires a technology classroom equipped with a sound system, television/VCR, and piano.

Changes Effective Summer 2020:

- Description

MIS 301: Business Analytics (3 Credits)
Old Listing Effective Through Spring 2020:

The application of IT tools and techniques to extract value from data sets to manage, manipulate and analyze data in organizations. MIS 301 Business Analytics (3) MIS 301 investigates use of databases, basic data mining tools, social networking software, and advanced level of spreadsheet management for analysis of large amounts of data. Learning methods emphasize active learning in the application of methods and tools to real data and the presentation of the results. Topics may include methods for analyzing not only structured data, but also unstructured data from the web, emails, blogs, social networks, click streams, etc. Finally, techniques for visualizing, presenting and communicating information in a useful way will be presented. Prerequisite: SCM 200 or STAT 200 ; MIS 204; Concurrent: MATH 110 or MATH 140
Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

**MUSIC 109: The Music of the Beatles (3 Credits) (BA) (GA)**
Old Listing Effective Through Spring 2020:

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

Changes Effective Summer 2020:

- Description
- Abbreviated Title

**NUTR 175Z: Healthy Food for All: Factors that Influence What we Eat in the US - LINKED (3 Credits) (US) (GHA)**
Old Listing Effective Through Spring 2020:

This course encompasses the study of eating behavior and how fundamentals of nutrition-policy (e.g., farm bill, child nutrition act that provides food education and food assistance in relation to Dietary Guidelines for Americans and Dietary Reference Intakes), the food environment, and behavioral economics influence food choice thereby affecting the overall health, nutrition, and well-being of individuals and communities within the United States. While aspects of this are covered in a variety of disciplines (e.g., nutrition, food science, agriculture, economics, sociology, and others), these aren’t always integrated for students. The purpose of this course is to provide an interdisciplinary perspective of how individuals, including those living in poverty, make food choices within their communities, and how these choices impact health and wellness. Topics include an introduction to what we eat, why we eat, and the key roles of diet on health with focus on the links among poverty, food security and obesity. The politics of food discusses portions of the Farm Bill and Child Nutrition Act with focus on the Women, Infants and Children Supplementary Food Program (WIC), the Special Nutrition Assistance Program (SNAP), and school lunch, and the influence these programs have on what is produced and consumed. The behavioral economics of food will focus on determinants of food choice including taste, cost, nutrition, and convenience as well as provide an overview of the biology and psychology of eating through hand-on experiential activities. Through these experiences, students will gain household budgeting skills across income levels that provides perspective to barriers to eating healthy. Lastly, food access dimensions will be discussed (e.g., food desserts, food swamps, grocery stores, targeted advertising/marketing) will be discussed. This course is a linked course with AGBM 170Z meets the General Education Integrative Studies requirement.

Prerequisites: NUTR 100; OR NUTR 251; OR FDSC 105; Prerequisite or Concurrent Courses: AGBM 170Z

Changes Effective Summer 2020:

- Prerequisite/Corequisite/Concurrent Courses

**NUTR 360: Nutrition Education and Behavior Change Theory (3 Credits)**
Old Listing Effective Through Spring 2020:

This course covers a range of topics related to providing evidence-based nutrition information to individuals as well as population-level health. It is designed to be an introductory course in nutrition education and theory within the Nutritional Sciences major. Students will explore tenets of communication, education, and behavioral theories and models pertinent to the development and dissemination of nutrition information. Exploration of the fundamentals of food behavior, basic communication strategies essential to the nutrition counseling relationship, group facilitation, and working with diverse population groups will be examined through didactic lecture, individual practice, and project-based learning. Using current technologies to locate and understand evidence-based research, guidelines and protocols will be emphasized. Students will apply information discussed to the development of culturally sensitive nutrition education materials that are appropriate for the target population that is being addressed.

Prerequisites: NUTR 251 Concurrent Courses: NUTR 361

Changes Effective Summer 2020:

- Prerequisite/Corequisite/Concurrent Courses

**PHYS 250: Introductory Physics I (4 Credits) (BA) (GN)**
Old Listing Effective Through Spring 2020:

PHYS 250 Introductory Physics I (4) (GN)(BA) This course meets the Bachelor of Arts degree requirements. Algebra-based introduction to classical mechanics, including such topics as one- and two-dimensional motion, vectors, relative and circular motion, force and dynamics, Newton’s laws of motion, work and kinetic energy, potential energy and energy conservation, momentum, rotational motion and angular velocity, static equilibrium and properties of materials, static and moving fluids, vibrations, simple harmonic motion, general properties of waves, sound and human hearing, temperature and kinetic theory, heat and calorimetry, and the basic laws of thermodynamics. This course is designed to provide students with a working knowledge of the elementary physics principles mentioned above, as well as their applications to everyday phenomena and to the life sciences, to enhance their conceptual understanding of physical laws, and to increase their problem solving abilities especially as applied to physical systems. The mathematical prerequisites for this course (and the subsequent PHYS 251) are mathematics at the level of algebra and trigonometry, demonstrated by suitable coursework or demonstration of satisfactory performance on the mathematical proficiency exam. The exact model of course instruction varies at different campuses due to different resources and class sizes. Students attend several class meetings including at least one lab or activity period per week. Students perform laboratory experiments, discuss their results, and write up their conclusions in weekly lab reports. The course is a prerequisite for the second semester continuation, PHYS 251.

Prerequisites: Enforced Prerequisite at Enrollment: Math 22 and Math 26 or Math 26 and satisfactory performance on the mathematics placement examination or Math 40 or Math 41 or satisfactory performance on the mathematics placement examination.

Changes Effective Summer 2020:

- Prerequisite/Corequisite/Concurrent Courses

**PLET 323: Packaging Processes (3 Credits)**
Old Listing Effective Through Spring 2020:

In-depth studies and laboratory experiments will be conducted on processes such as blow molding, thermoforming, extrusion and other packaging processes. PL ET 323 Packaging Processes (3) In this course the student will learn about plastic packaging processes of blow molding, thermoforming, extrusion. Other minor processes will be presented. The
course objectives are to develop student proficiencies in identifying the polymer material requirements for each process, in identifying the mold design and construction techniques for each process, and knowing how plastic packaging processes differ from injection molding. The laboratory will include experiments that show the advantages of each process to develop student competency in running equipment for each process explored. The students shall also develop competency in conducting elementary process troubleshooting for each process. Student competency is assessed by graded quizzes, examinations, homework, and special assignments. The course is offered once per year with an enrollment of 40 to 50 students.

Prerequisite: PL ET227, PL ET304

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

PLSC 110: Rights in America (3 Credits) (US) (BA) (GS)
Old Listing Effective Through Spring 2020:

This course explores the historical and contemporary struggles of particular groups within American society to expand their rights. PL SC 110 Rights in America (3) (GS;US) The American political system established in 1787 promised several fundamental things: (1) a social order not based upon aristocracy; (2) the rule of law; and (3) basic unalienable liberty. But some groups were excluded from these. This course explores the historical and contemporary struggles of particular groups within American society to expand their rights. We will explore the efforts of African-Americans, women and other marginalized groups to obtain basic liberty, equal protection and civil rights. As we discuss these groups, political institutions, and American politics we will focus on four overarching questions: (1) what is liberty; (2) why do some groups need to fight for rights; (3) how did the expansion of rights come about; (4) and what is the role of courts in expanding, or not expanding, rights? Our exploration of rights in American will proceed one group at a time (i.e., African-Americans, women). We will look first at the history of how rights developed for each group and then discuss the implications of this more generally for the state of equal protection and discrimination in the country. At the end of the course, issues that equality claims into a new dimension are considered. These include movements for separatism in race and gender; the debate over reverse discrimination; speech codes; native Americans and peyote; giving personhood status to the fetus; polygamy; and animal rights.

Changes Effective Summer 2020:

- Description
- Abbreviated title
- Number to 210N
- Add GH Designation
- Add Inter-Domain Designation
- Add BA Humanities Designation

PLSC 110H: Rights in America (3 Credits) (H) (US) (BA) (GS)
Old Listing Effective Through Spring 2020:

No Description

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

PLSC 123: Ethnic and Racial Politics (3 Credits) (US) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:

Political movements among United States ethnic and racial groups; government policies on race and ethnicity; comparison to other culturally diverse countries. PL SC 123 Ethnic and Racial Politics (3) (GS;US;IL)(BA) This course meets the Bachelor of Arts degree requirements. Despite many historical predictions that ethnic and racial distinctions would decline over time, recent events in the United States and around the world indicate that ethnic and racial identity remain strongly significant in politics. An analysis of the role race and ethnicity play in politics and government is of major relevance not only in the field of political science, but in several other fields, such as anthropology, sociology, economics, history, linguistics, and religious studies. By studying ethnic and racial politics, students will learn the various methods by which social groups organize to achieve political goals, how and why opposition usually arises to those goals, and what policies governments can pursue to defuse social tensions. Students will also learn the historical and cultural basis of ethnic identities and the resulting political disputes that result when social groups differentiate themselves from other social groups. Important to the course will be the use of comparative case studies of the United States to ethnic and racial politics in other countries, such as Canada, Indonesia, and South Africa. Examination of relevant political movements and government policies in these countries will help to determine whether the United States can learn from others or whether others can learn from the United States. The course will also include an international component through the comparative case studies as well as discussion of immigration policy and the role of ethnic groups in U.S. foreign policy.

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Add GH
- Add Inter-Domain
- Add BA Humanities
- Number to 223N

PLSC 130: American Political Campaigns and Elections (3 Credits) (US) (BA) (GS)
Old Listing Effective Through Spring 2020:

Methods and strategies of American political campaigns: polls, political consultants, parties, and the media.

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Number to 230

PT 120: Human Musculature and Functional Anatomy (2 Credits)
Old Listing Effective Through Spring 2020:
This course is designed to give the learner a clear understanding of the locations, actions, and innervations of muscles in the human body and provide a foundation for learning and applying the principles of muscle strength testing. Course objectives include: demonstrating knowledge in the properties of muscle tissue and the basic mechanisms for muscle contraction; identifying and naming attachments and innervations of the muscles of the trunk and extremities; demonstrating competence in identifying muscle strength and weakness through manual muscle testing of trunk and skeletal musculature; and identifying different types of muscle contraction and interaction. The specific muscles involved in movement and stability of the appendicular and axial skeleton will be studied in detail. The information in this course is foundational to the application of physical therapy modalities and exercise, which are included in the PTA curriculum. The course will include lecture and laboratory components. Course content will be delivered in lecture and on-line materials. Enrollment is limited to students admitted to the 2PTA major.

Concurrent Courses: PT 100; OR PT 100S, BIOL 129

Changes Effective Summer 2020:

• Prerequisite/Corequisite/Concurrent Courses

PT 270: Pathophysiology (5 Credits)
Old Listing Effective Through Spring 2020:

This course is designed to give the PTA student a working knowledge of the physiology of disease and conditions commonly seen in physical therapy. Basic signs, symptoms, causes, and processes of disease and conditions will be covered. Diagnostic criteria, progression, and interventions, including physical therapy interventions, medical and surgical interventions, and pharmaceutical interventions will be addressed. Areas of study in the course may include, but are not limited to, inflammation and healing, infection, immunity and immune disorders, and disorders of the following systems: cardiovascular, respiratory, musculoskeletal, integumentary, endocrine, lymphatic, neurological, hematologic, hepatic, gastrointestinal, hepatic and biliary, renal and urological, genital and reproductive. Genetic disorders, cancer, and mental health will also be addressed. By the completion of this course, a student should be able to: (1) Define and apply terminology used in Pathophysiology and the ICF Disablement Model (2) Discuss inflammation and healing, (3) Discuss the immune system in terms of its function and possible disorders (4) Identify infectious conditions and describe their transmission and progression (5) List and describe conditions affecting the integumentary system and discuss the role of physical therapy in treating skin conditions (6) Discuss conditions of and applications for physical therapy for the following systems: cardiovascular, respiratory, lymphatic, musculoskeletal, neurological, and endocrine. (7) Identify conditions, diseases, and problems with the body systems, including the neurological, hematologic, gastrointestinal, hepatic, biliary, renal and urological, genital and reproductive. (8) Discuss cancer in terms of pathophysiology, risk factors, and various types of cancer. (9) Discuss special considerations for the PTA when working with patients who are geriatric, in specialized acute care units, and with various comorbidities. (10) Identify mental health issues and appropriate interactions and interventions with patients with mental or emotional health issues. This is a writing intensive course that will include instructor written evaluation and feedback of student's writing. The student writing will be specific to the Physical Therapy discipline and will be addressed. Areas of study in the course may include, but are not limited to, inflammation and healing, infection, immunity and immune disorders, and disorders of the following systems: cardiovascular, respiratory, musculoskeletal, integumentary, endocrine, lymphatic, neurological, hematologic, hepatic, gastrointestinal, hepatic and biliary, renal and urological, genital and reproductive. Genetic disorders, cancer, and mental health will also be addressed. By the completion of this course, a student should be able to: (1) Define and apply terminology used in Pathophysiology and the ICF Disablement Model (2) Discuss inflammation and healing, (3) Discuss the immune system in terms of its function and possible disorders (4) Identify infectious conditions and describe their transmission and progression (5) List and describe conditions affecting the integumentary system and discuss the role of physical therapy in treating skin conditions (6) Discuss conditions of and applications for physical therapy for the following systems: cardiovascular, respiratory, lymphatic, musculoskeletal, neurological, and endocrine. (7) Identify conditions, diseases, and problems with the body systems, including the neurological, hematologic, gastrointestinal, hepatic, biliary, renal and urological, genital and reproductive. (8) Discuss cancer in terms of pathophysiology, risk factors, and various types of cancer. (9) Discuss special considerations for the PTA when working with patients who are geriatric, in specialized acute care units, and with various comorbidities. (10) Identify mental health issues and appropriate interactions and interventions with patients with mental or emotional health issues. Course content will be delivered in lecture and on-line materials. Enrollment is limited to students accepted in the 2PTA major.

Prerequisites: A grade of "C" or better in: BIOL 129, BIOL 141, BIOL 142, PT 100 OR PT 100S
to, inflammation and healing, inflection, immunity and immune disorders, and disorders of the following systems: cardiovascular, respiratory, musculoskeletal, integumentary, endocrine, lymphatic, and neurological. By the completion of this course, a student should be able to: (1) Define and apply terminology used in Pathophysiology and the ICF Disablement Model (2) Discuss inflammation and healing, (3) Discuss the immune system in terms of its function and possible disorders (4) Identify infectious conditions and describe their transmission and progression (5) Discuss conditions affecting the integumentary system and discuss the role of physical therapy in treating skin conditions (6) Discuss conditions of applications for physical therapy for the following systems: cardiovascular, respiratory, lymphatic, musculoskeletal, neurological, and endocrine. This course is available to students enrolled in the PTA major. Course content will be delivered in lecture and on-line materials.

Prerequisites: Grades C or better required in: PT 100 OR PT 100S, BIOL 129, BIOL 141, BIOL 142

Changes Effective Summer 2020:

- Prerequisite/Corequisite/Concurrent Courses

PT 271W: Pathophysiology I (3 Credits) (WF)  
Old Listing Effective Through Spring 2020:

This course is designed to give the PTA student a working knowledge of the physiology of disease and conditions commonly seen in physical therapy. Basic signs, symptoms, causes, and processes of disease and conditions will be covered. Diagnostic criteria, progression, and interventions, including physical therapy interventions, medical and surgical interventions, and pharmaceutical interventions will be addressed. Areas of study in the course may include, but are not limited to, inflammation and healing, inflection, immunity and immune disorders, and disorders of the following systems: cardiovascular, respiratory, musculoskeletal, integumentary, endocrine, lymphatic, and neurological. By the completion of this course, a student should be able to: (1) Define and apply terminology used in Pathophysiology and the ICF Disablement Model (2) Discuss inflammation and healing, (3) Discuss the immune system in terms of its function and possible disorders (4) Identify infectious conditions and describe their transmission and progression (5) List and describe conditions affecting the integumentary system and discuss the role of physical therapy in treating skin conditions (6) Discuss conditions of applications for physical therapy for the following systems: cardiovascular, respiratory, lymphatic, musculoskeletal, neurological, and endocrine. This course is available to students enrolled in the PTA major. Course content will be delivered in lecture and on-line materials.

Prerequisites: Grades C or better required in: PT 100 OR PT 100S, BIOL 129, BIOL 141, BIOL 142

Changes Effective Summer 2020:

- Prerequisite/Corequisite/Concurrent Courses

PT 384: Applied Kinesiology (3 Credits)  
Old Listing Effective Through Spring 2020:

The focus of PT 384, Applied Kinesiology, is to incorporate anatomical structure of the human body, principles of biomechanics, kinetics, and kinematics with the study of human motion and mobility. Areas of instruction include: joint structure and function; arthro- and osteokinematics; muscular kinesiology; posture; normal gait; leverage systems and the forces involved in moving the human body; and joint motion assessment through goniometry and functional measures. This course prepares PTA students for integration of kinesiological concepts into the application of physical therapy interventions. Course objectives include: defining key kinesiological and biomechanical terms and applying concepts to human movement scenarios; demonstrating understanding of: joint configuration and movement; joint motion measurement; muscular kinesiology; posture; and gait. Course content will be delivered in the classroom, laboratory and on-line. The course will include lecture and laboratory components and students will be expected to demonstrate competence in both written and practical examinations. Enrollment is limited to students admitted to the 2PTA major.

Prerequisites: Grade of C or better in: BIOL 129 Concurrent Courses: PT 120

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
- Abbreviated Title

RADSC 101: Radiographic Introduction and Procedures/Lab I (4 Credits)  
Old Listing Effective Through Spring 2020:

Radiology history, basic radiation protection principles, medical terminology, introduction to radiography and radiographic procedures/ lab.

Changes Effective Summer 2020:

- Description
- Abbreviated Title

RADSC 102: Radiographic Procedures/Lab II (4 Credits)  
Old Listing Effective Through Spring 2020:

Continuation of Radiographic Procedures/Lab I to include appendicular skeleton and introduction to head work.

Prerequisite: RADSC101, RADSC110

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses

RADSC 103: Radiographic Procedures/Lab III (3 Credits)  
Old Listing Effective Through Spring 2020:

Continuation of Radiographic Procedures/Lab II to include digestive, urinary, and biliary systems and facial bone work.

Prerequisites: RADSC 102

Changes Effective Summer 2020:

- Description
- Prerequisite/Corequisite/Concurrent Courses
• Prerequisite/Corequisite/Concurrent Courses

RADSC 110: Patient Care in Radiologic Sciences (3 Credits)
Old Listing Effective Through Spring 2020:

Basic concepts of routine and emergency patient care procedures addressed from the radiographer’s perspective. RADSC 110 Patient Care in Radiologic Science (3) The content of this course includes the basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are addressed from the radiographer’s perspective. Students will learn proper infection control techniques and will prove competency in CPR. This course is a requirement of the radiography (radiologic technology) curriculum and could be utilized as an option for students interested in patient care procedures such as health science majors. As is consistent with the core courses in the Radiography program, a passing grade for enrolled radiography students is 75%.

Changes Effective Summer 2020:

• Description

RADSC 204: Radiographic Exposure I (3 Credits)
Old Listing Effective Through Spring 2020:

Fundamental knowledge base of factors that govern and influence the production and recording of radiologic images.

Prerequisite: RADSC103

Changes Effective Summer 2020:

• Description

RADSC 205: Radiographic Exposure II (3 Credits)
Old Listing Effective Through Spring 2020:

Continuation of exposure factors concerning radiographic imaging; film, electronic imaging, processing, quality assurance and related areas will be emphasized.

Prerequisites: RADSC 204

Changes Effective Summer 2020:

• Description

RADSC 206: Advanced Radiographic Procedures (3 Credits)
Old Listing Effective Through Spring 2020:

Emphasis on specialized positioning and advanced radiographic procedures; includes introduction to cross-sectional anatomy.

Prerequisite: BIOL 141, RADSC205

Changes Effective Summer 2020:

• Description

RADSC 207: Registry Review (4 Credits)
Old Listing Effective Through Spring 2020:

Registry Review includes material from all radiological science courses, with emphasis on National Certification Examination, and career planning.

Prerequisite: RADSC206

Changes Effective Summer 2020:

• Description

RADSC 210: Radiographic Pathology (3 Credits) (WF)
Old Listing Effective Through Spring 2020:

Writing intensive study of theories of disease causation and the pathophysiological disorders compromising health systems with emphasis on radiographic presentation. RADSC 210W Radiographic Pathology (3) A writing-intensive study of the basic fundamentals of pathology (disease process) with emphasis placed on radiographic presentation. Material covered includes the basic concepts of disease and terms related to pathology, systemic classifications of disease including etiology, examples, complications and prognosis, radiographic procedures and presentation, and the health process. Writing requirements include two short papers and a longer sequenced paper. All papers will receive instructor feedback and subsequent submission of a final revised paper. An informal writing assignment with peer review is also required. The writing process evolves throughout the course as the student applies knowledge learned to current assignments. This course is a requirement of the radiography (radiologic technology) curriculum and could be utilized as an option for students interested in a visual study of disease process such as health science and biology majors or for students in need of a writing-intensive course. As is consistent with the core courses in the Radiography program, a passing grade for enrolled radiography students is 75%.

Prerequisite: BIOL 129, BIOL 141

Changes Effective Summer 2020:

• Description

• Prerequisite/Corequisite/Concurrent Courses

• Number to 210W

• Abbreviated Title

RADSC 220: Radiation Biology and Protection (3 Credits)
Old Listing Effective Through Spring 2020:

Study the principles of interaction of radiation with living systems, effects on cells and tissues, biological response, and radiation protection. RADSC 220 Radiation Biology & Protection (3) The content of this course includes the basic fundamentals of radiation interactions, basic biology with emphasis placed on effects of radiation exposure on cells and on radiation protection mandates and techniques. This course is a requirement of the radiography (radiologic technology) curriculum and could be utilized as an option for other students interested in radiation effects such as health science, biomedical engineering, health physics or physics and biology majors. As is consistent with the core courses in the Radiography program, a passing grade for enrolled radiography students is 75%.

Changes Effective Summer 2020:
RADSC 230: Radiographic Physics (3 Credits)
Old Listing Effective Through Spring 2020:
Basic knowledge of atomic structure, characteristics of radiation, x-ray production, photon interactions, circuitry, imaging equipment and quality control. RADSC 230 Radiographic Physics (3) The content of this course includes the basic fundamentals of atomic structure, characteristics of radiation, x-ray production, photon interactions, circuitry, imaging equipment and quality control. This course is a requirement of the radiography (radiologic technology) curriculum and could be utilized as an option for other students interested in radiation interactions and imaging equipment such as health science, biomedical engineering, health physics or physics majors. As is consistent with the core courses in the Radiography program, a passing grade for enrolled radiography students is 75%.

Changes Effective Summer 2020:

• Description

RADSC 295A: Radiologic Science Clinical Internship I (1-1.5 Credits: Maximum of 1.5 Credits)
Old Listing Effective Through Spring 2020:
Supervised clinical education activities under the direction of registered radiologic technologies.
Prerequisite: admission to 2RSUCC program

Changes Effective Summer 2020:

• Description

RADSC 295B: Radiologic Science Clinical Internship II (1 Credit)
Old Listing Effective Through Spring 2020:
Supervised clinical education activities under the direction of registered radiologic technologists.
Prerequisite: RADSC 295A

Changes Effective Summer 2020:

• Description

• Credits

RADSC 295C: Radiologic Science Clinical Internship III (1-2 Credits)
Old Listing Effective Through Spring 2020:
Supervised off-campus, non-group instruction including field experiences, practica, or internships. Written and oral critique of activity required.
Prerequisite: RADSC 295B

Changes Effective Summer 2020:

• Description

• Credits

• Prerequisite/Corequisite/Concurrent Courses

• Abbreviated Title

RADSC 295D: Radiologic Science Clinical Internship IV (1 Credit: Maximum of 1 Credit)
Old Listing Effective Through Spring 2020:
Supervised off-campus group instruction including field experiences, practica, or internships. Written and oral critique of activity required.
Prerequisite: RADSC 295C

Changes Effective Summer 2020:

• Prerequisite/Corequisite/Concurrent Courses

RADSC 295E: Radiologic Science Clinical Internship V (1-2 Credits)
Old Listing Effective Through Spring 2020:
Supervised off-campus, nongroup instruction including field experiences, practica, or internships. Written and oral critique of activity required.
Prerequisite: RADSC 295D

Changes Effective Summer 2020:

• Credits

• Prerequisite/Corequisite/Concurrent Courses

• Abbreviated Title

RADSC 295F: Radiologic Science Clinical Internship VI (1-2 Credits)
Old Listing Effective Through Spring 2020:
Supervised off-campus, non-group instruction including field experiences, practica, or internships. Written and oral critique of activity required.
Prerequisites: RADSC 295E

Changes Effective Summer 2020:

• Credits

• Abbreviated Title

SCM 200H: Honors Introduction to Statistics for Business (4 Credits) (H) (GQ)
Old Listing Effective Through Spring 2020:
Topics include descriptive statistics, probability distributions, statistical inference, regression and correlation, and forecasting. SCM 200H Honors Introduction to Statistics for Business (4) (GQ) SCM 200 introduces basic statistical concepts and models within the framework of business problems and applications. Students learn about the usefulness of business statistics to decision making, how to perform basic statistical and analytical procedures, and how to interpret, critically evaluate, and analyze data. Special emphasis is given to active learning methods. Grades are primarily determined by homework, quizzes, mid-term exams and a final exam.
Prerequisite: MATH 021 or higher or satisfactory score on the mathematics placement examination

Changes Effective Summer 2020:

• Description

• Prerequisite/Corequisite/Concurrent Courses

SPAN 130: Iberian Civilization (3 Credits) (IL) (BA) (GH)
Old Listing Effective Through Spring 2020:
Spanish and Portuguese life from the medieval period to the present; literature, the arts, and contemporary problems in historical perspective.

Changes Effective Summer 2020:

- Description

THEA 100: The Art of the Theatre (3 Credits) (US) (IL) (BA) (GA)

Old Listing Effective Through Spring 2020:

An experiential survey of all aspects of the living theatre, as presented by a resident company of theatre artists. THEA 100 The Art of the Theatre (3) (GA;US;IL) (BA) This course meets the Bachelor of Arts degree requirements. This course is an introduction to the living art of the theatre. Beginning with the script as the source of production aesthetics, analysis of textual context, structure, and genre provide tools to the imaginative impulses of the theatre artist and audience. As a variety of individual texts are analyzed and explored, the performance of scenes from the texts supports the imaginative process as each topic is demonstrated by a resident Company of theatre artists. The course is concerned with the universality of the theatrical impulse, and includes a selection of international and multi-ethnic voices and performance techniques. This is a required course for all theatre majors and provides the groundwork for all other theatre courses. At the same time, the course is designed to allow the general student to experience and understand the art of the theatre.

Changes Effective Summer 2020:

- Description

WMNST 458: Critical Issues in Reproduction (3 Credits) (GS)

Old Listing Effective Through Spring 2020:

Examination and analysis of the new reproductive technologies from the standpoint of medical ethics, feminism, and sociocultural influences.

Cross-Listed Courses: BBH 458
Prerequisite: BIOL 141 or PSYCH100 or WMNST100

Changes Effective Summer 2020:

- Description

- Prerequisite/Corequisite/Concurrent Courses

- Abbreviated title

- Remove GS Designation

- Add GHW Designation

Program Changes

Biology, Minor (Behrend) (BIOBC_UMNR)

Effective December 23, 2019:

- Program phased out

Biomedical Engineering, B.S. (BME_BS)

Effective Spring 2020:

- Revised student outcomes

- Added BIOL 162 and BIOL 164 to Additional Courses for the Major

- Added BME 408 and BME 413 to Additional Courses in the Biomaterials Option

- Moved BME 409 from Prescribed Courses to Additional Courses in the Biomaterials Option

- Added BME 408 to Prescribed Courses in the Biomechanics Option

Community, Environment, and Development, B.S. (CED_BS)

Effective Spring 2020:

- Revised program description

- Increased Requirements for the Major from 88-90 to 90-92 credits

- Added CED 275 and CED 327 to Prescribed Courses

- Removed CED 427 from Prescribed Courses

- Moved ENGL 15, GEOG 160, and CAS 100 to Additional Courses

- Removed CMPSC 101 from Additional Courses

- Added AGBM 106, CAS 137H, ENGL 137H and GEOG 260 to Additional Courses

- Removed SOC 23 from Prescribed Courses in the Community and Economic Development Option

- Added CED 355 to Prescribed Courses in the Community and Economic Development Option

- Moved CED 430W and 452 from Additional Courses to Prescribed Courses in the Community and Economic Development Option

- Removed ECON 428 from Prescribed Courses in the Environmental Economics and Policy Option

- Added CED 329H to Prescribed Courses in the Community and Economic Development Option

- Removed SOC 23 and RSOC 470 from Prescribed Courses in the International Development Option

- Added CED 445 and 470 to Prescribed Courses in the International Development Option

- Removed ECON 428 from Prescribed Courses in the Environmental Economics and Policy Option


- Removed SOC 23 and RSOC 470 from Prescribed Courses in the International Development Option

- Added CED 445 and 470 to Prescribed Courses in the International Development Option

Computer Science, B.S. (Behrend) (CMPBC_BS)

Effective Spring 2020:

- Removed STAT 301 from Prescribed Courses

- Added STAT 318 to Prescribed Courses

- Removed BIOL 230 from Additional Courses

- Added BIOL 230W and BIOL 230M to Additional Courses

- Revised Supporting Courses

Data Sciences, B.S. (DATSC_BS, DTSCE_BS, DTSCS_BS)

Effective Spring 2020:

- Revised Entrance to Major Requirements

- Revised program description

- Decreased Requirements for the Major from 77-90 to 72-81 credits

- Removed ENGL 202C and IST 210 from Prescribed Courses for the Major

- Moved STAT 184 from Prescribed Courses for the Statistical Modeling Data Sciences Option to Prescribed Courses for the Major

- Moved CMPSC 121, CMPSC 122, and STAT 200 from Prescribed Courses to Additional Courses for the Major

- Added CMPSC 131, CMPSC 132, and DS 200 to Additional Courses for the Major

- Removed CED 300, ENGL 15, ENGL/CAS 137H, and ENGL/CAS 138T from Additional Courses for the Major

- Removed IST 110, IST 230, IST 495, DS 200, DS 310, DS 320, and DS 330 from Prescribed Courses for the Computational Data Sciences Option
• Added CMPSC 221 and CMPSC 455 to Prescribed Courses for the Computational Data Sciences Option
• Moved MATH 230, MATH 360, MATH 442, MATH 448, MATH 465, and STAT 415 from Prescribed Courses in the Applied Data Sciences Option to Prescribed Courses in the Computational Data Sciences Option and the Statistical Modeling Data Sciences Option
• Removed Additional Courses section from the Computational Data Sciences Option
• Changed Appendix B to Appendix D in the Supporting Courses and Related Areas of the Computational Data Sciences Option
• Removed CMPSC 461 from Prescribed Courses for the Applied Data Sciences Option
• Added DS 402, DS 442, IST 441, IST 442, IST 445H, IST 462, and SODA 308 to Additional Courses for the Applied Data Sciences Option
• Added DS 310 and CMPSC 448 to Additional Courses for the Statistical Modeling Data Sciences Option

Digital Arts, Certificate (DART_UCT)
Effective Spring 2020:
• Changed Prescribed Courses

Entrepreneurship and Innovation, Minor (ENTI_UMNR)
Effective Spring 2020:
• Removed AA 324 from Additional Courses in the Art Cluster Required Courses
• Moved AA 322 from Required Courses to Choose list in Art Cluster
• Added AA 121, PHOTO 404, and GD 304 to Art Cluster
• Added AGBM 200, AGBM 220, AGBM 302, ERM 402, HORT 450 and HORT 455 to the Food and Bio-innovation Cluster Revised New Media Cluster

German, B.A. (GERBA_BA)
Effective Spring 2020:
• Decreased the number of credits required for the Major from 37 to 34 credits
• Added the WAC attribute to GER 302 and GER 401 in Prescribed Courses
• Changed Additional Courses section from 22 credits to 19 credits

German, B.S. (GERBS_BS)
Effective Spring 2020:
• Added Integrated B.S. in German and M.I.A. in International Affairs

Information Sciences and Technology, A.S. (2ISUC_AS)
Effective November 11, 2019:
• Enrollment hold implemented for New Kensington campus

Information Sciences and Technology, B.A. (ISTBA_BA)
Effective December 23, 2019:
• Program phased out

Italian, B.A. (ITBA_BA)
Effective Spring 2020:
• Revised program description
• Removed the Language and Literature and the Italian Studies Options
• Added IT 320 to Prescribed Courses

Management, Minor (MANGT_UMNR)
Effective December 23, 2019:
• Program phased out

Philosophy, B.S. (PHIL_BS)
Effective Fall 2019:
• New B.S. program added.

Political Science, B.A. (PLSC_BA)
Effective Spring 2020:
• Added Integrated B.A. in Political Science and Masters of Public Policy

Psychology, B.S. (Liberal Arts) (PSYBS_BS)
Effective Spring 2020:
• Removed ANTH 451, ANTH 455, HIST 423, HIST 425, PHIL 420, PLSC 487, PLSC 441, SOC 455, SOC/WMNST 456, and SOC/WMNST 456 from Additional Courses in the Business Option
• Added AFAM/HIST 210, AFAM/SOC 409, AFR/IB/PLSC 440, ENGR 451, GLIS 102N, HIST 151, HIST 155, HPA 210, HPA 211, LER/WMNST 136, LER 201, LER 304, LER 305, LER 475, LER/RHS 410, and RHS 300 to Additional Courses in the Business Option
• Removed ANTH 473 and ANTH 473W from Additional Courses in the Life Sciences Option
• Added BIOL 161 to Additional Courses in the Life Sciences Option
• Added BIOL 161 to Additional Courses in the Neuroscience Option
• Removed CMPSC 202 and MATH 18 from Additional Courses in the Quantitative Skills Option
• Added MATH 18 to Additional Courses in the Quantitative Skills Option
• Integrated B.S. in Psychology and M.S. in Human Resources and Employment Relations

FAQs
1. Where can I find a list of General Education courses and information about requirements?
   • For information about General Education requirements, please see the General Education (http://bulletins.psu.edu/undergraduate/general-education) section in this Bulletin.

2. The General Education requirements have changed. Do the new requirements apply to me?
   • The new General Education requirements apply to students who start at Penn State in Summer 2018 and later. Requirements have not changed for students who began at Penn State before this semester. The older set of requirements can be found in the Archives page. Additional information is available on the Office of General Education website (https://gened.psu.edu).

3. What does the blue keystone symbol mean?
   • The keystone indicates that the course is designated as a General Education course. See the degree requirements for your program to identify the General Education courses that are required. Not
all courses marked with the keystone count as meeting General Education requirements when required within your program. See the program requirements and speak to an adviser regarding General Education courses that count or do not count toward the General Education requirements.

4. Where can I find bachelor of arts degree requirements?
   • Bachelor of arts degree requirements are included in the program requirements section for B.A. programs. You may also see the B.A. requirements in the Academic Information (http://bulletins.psu.edu/undergraduate/general-information/academic-information) section.

5. Where can I find a list of courses and course descriptions?
   • You may find courses and descriptions several different ways within the Bulletin. You may navigate to the full listing of courses and descriptions from the Courses (http://bulletins.psu.edu/university-course-descriptions) link in the top navigation menu. You may also scroll over any course number within the Bulletin to see the course description in a course bubble. Search for specific courses through the search option on the homepage or in the search functions throughout the Bulletin.

6. Which Undergraduate Bulletin should I use?
   • Your official record of general education requirements, University degree requirements, and program requirements is found in the Bulletin that matches the semester in which you enrolled at Penn State. See the Archive (http://bulletins.psu.edu/undergraduate/archive) page to find past Bulletins.

7. Where can I find past Bulletins?
   • Past Bulletins can be found on the Archive (http://bulletins.psu.edu/undergraduate/archive) page, which can be accessed from any page in the Bulletin’s top navigation menu.

8. When will the Undergraduate Bulletin be updated?
   • The Bulletin will be updated at the beginning of each semester (fall, spring, and summer). Changes that occur between updates are identified on the Changes (p. 6) page.

9. What course description information is currently showing in the Bulletin?
   • The University Bulletins shows course description data that is active as of the most recently released Schedule of Courses. When an upcoming semester’s Schedule of Courses is released, the course description information is updated on the same day to match that course data. Please visit the Understanding Course Description Information (p. 2) page to view the course description update calendar.

10. Why are there some courses listed in the Bulletin that I can’t schedule?
    • The Bulletin Course Description section displays all courses that are currently active at Penn State. Not all of these courses are taught every academic semester or year. To view courses that are available for enrollment by semester, please view the LionPATH Class Search (https://www.lionpath.psu.edu/psc/CSPRD/EMPLOYEE/HRMS/c/SA_LEARNER_SERVICES.CLASS_SEARCH.GBL?Page=SSR_CLSRCH_ENTRY&Action=U).

11. Where can I find information about minors?
    • Minors are a specific type of program and may be found through the search process by filtering by minor (http://bulletins.psu.edu/programs/#filter=filter_24).

12. Where can I find the Graduate Bulletin?
    • The Graduate Bulletin is located at: https://bulletins.psu.edu/graduate.

Have a question we didn’t include? Please let us know by emailing bulletins@psu.edu.